MULTI-CD CONTROL DSP
TUNER CD DECK AMPLIFIER

OWNER'S MANUAL

SUPER TUNER III

Thank you for purchasing this PIONEER product.
Before attempting operation, be sure to read this manual.

SPARE PARTS MASTER

PIONEER®
The Art of Entertainment

FH-P90

Precautions

CAUTION:
USE OF CONTROL OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION:
THE USE OF OPTICAL INSTRUMENTS WITH THIS PRODUCT WILL INCREASE EYE HAZARD.

MULTI-CD CONTROL DSP

TUNER CD DECK AMPLIFIER

FH-P90

OWNER'S MANUAL

Thank you for purchasing the PIONEER product. Please read this manual carefully before you start operation. This manual contains information for the operation of the system. Please keep it in a safe place for future reference.

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This section contains the points to be checked before using this system, information that should be known, cautions to be taken when using this unit, and the things that should be performed before using this unit. Be sure to read this section before using this unit.

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This section explains how to control sound quality and the sound field using the DSP function. Create and enjoy the ideal sound field for the vehicle using the DSP function.

Read this section before connecting and installing, to ensure correct wiring.

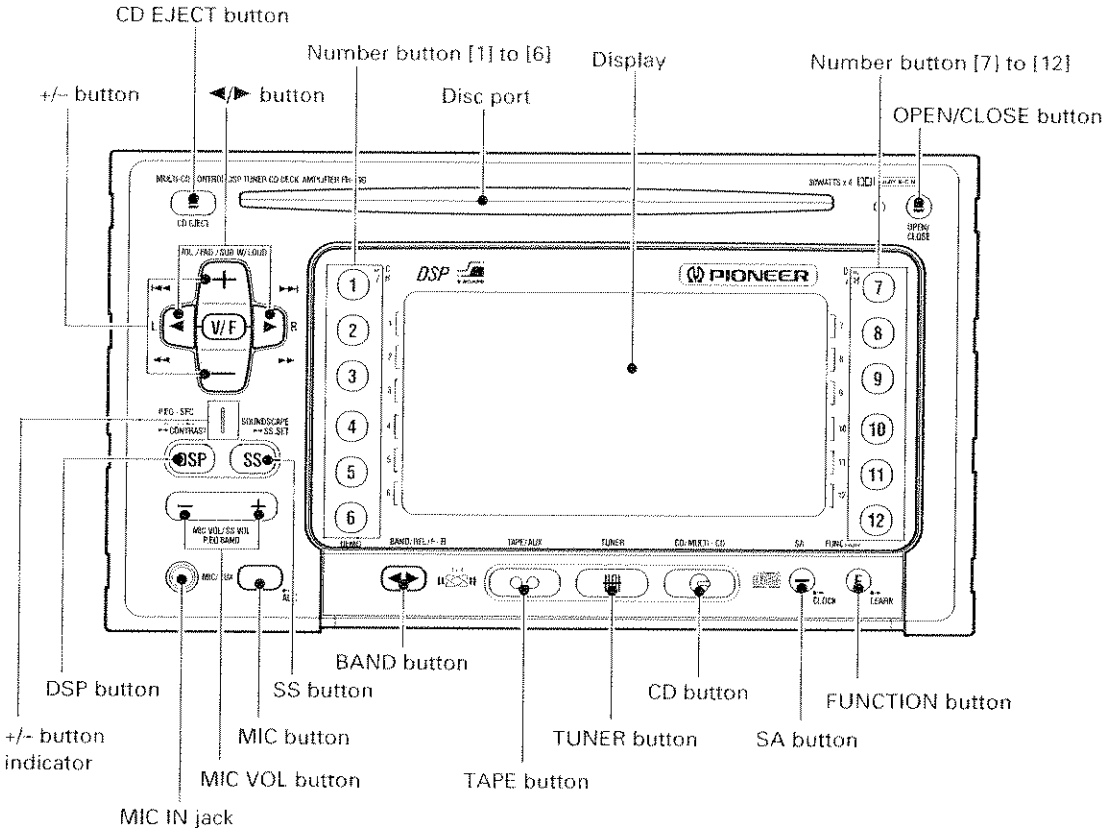
If there is reason to suspect a breakdown, read "Troubleshooting" before sending the unit in for repairs. "Specifications" includes the performance and technical data of this unit, such as maximum power consumption and weight.

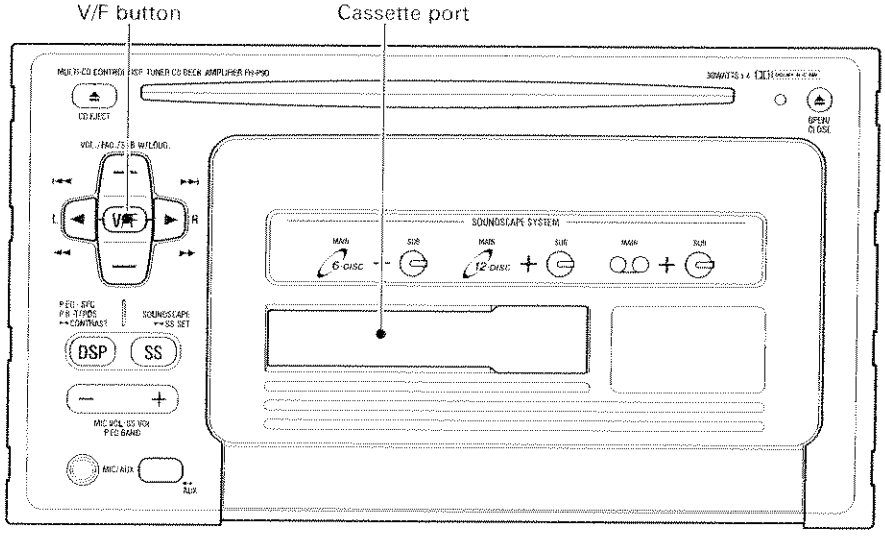
How to use this manual

Names and parts

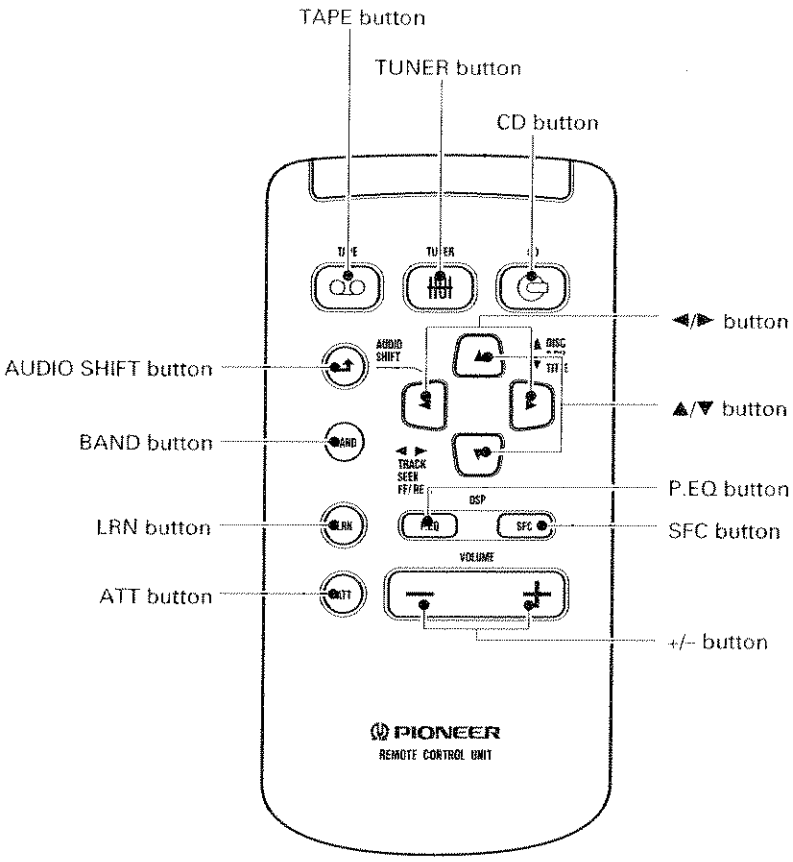
The positions and names of the operating buttons of this unit are as follows:

❖ Main unit





❖ Remote control unit



Symbols

The following three symbols are used in this manual.

CAUTION — never do this.

This symbol indicates dangerous action which must be avoided.

Note — follow the instructions carefully.

This symbol indicates action which can cause the equipment to fail if it is wrongly performed.

Additional information.

This symbol indicates that further information is available, for example on limits specifications, cautions on operation, and techniques needed to make full use of the unit.

Operations able to be performed by the remote control unit (remote control symbol)

Some operations of this unit can also be performed by the remote control unit. For such operations, a remote control symbol is indicated in this manual.

> For detail on use of the remote control unit, see page 50.

Preparation and preliminary information

This section contains the points to be checked before using this system, information that should be known, cautions to be taken when using this unit, and the things that should be performed before using this unit. Be sure to read this section before using this unit.

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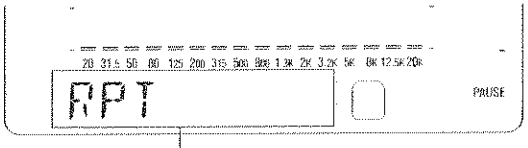
Please read this before using this unit

Supplied CD software

The CD software supplied with this unit contains sound effect to be used for the SOUNDSCAPE function. For more details, see "SOUNDSCAPE" on page 44 and the instruction manual of the CD software.

Scroll display

The display of this unit uses scroll display. When a button is pressed for an operation, information for that operation will scroll from the right to left on the scroll message section on the display. (For example, when the number button [9] is pressed for repeat mode during built-in CD playback, "RPT" will be shown on the scroll message section.)



Scroll message section

⚠ CAUTION

Precautions during driving

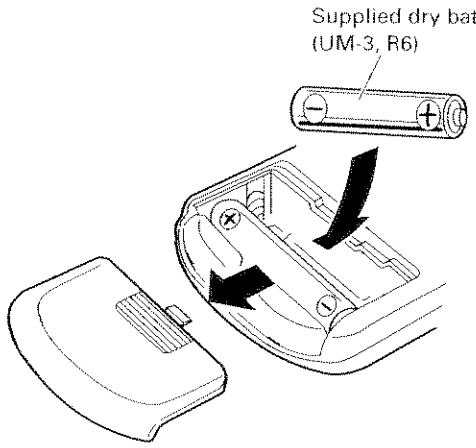
- **The driver must not read the scroll message during driving. This will disturb driving operation and is very dangerous.**

When the car battery is removed

Removing the car battery resets all memory settings (clock setting, radio presetting, etc.) stored in this unit. Set the memory again after replacing the car battery.

Before using the remote control unit

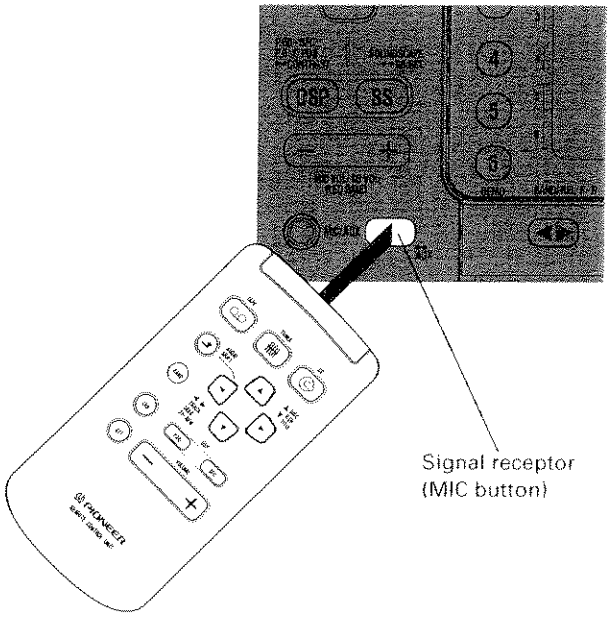
Loading the batteries



To prevent leakage or explosion

- **Be sure that the batteries are loaded with the positive (+) and negative (–) terminals the right way round.**
- **Do not mix new and old batteries.**
- **Do not mix different types of batteries. Even if the shape is the same, the voltage may be different.**
- **Remove the batteries from the remote control unit when it is not used for a long time.**
- **If leakage has occurred, completely wipe off the liquid from the battery compartment, then load new batteries.**

Operating the remote control unit



- The remote control unit may not operate when it is pointed towards your feet or the seat, because signals do not reach the signal receptor of this unit. Always point the remote control unit towards the signal receptor.
- As the remote control operation uses infrared light, the remote control unit may not operate if the signal receptor is hit by direct sunlight. In such a case, shield the signal receptor from direct sunlight.
- Replace the batteries when you feel the effect of the remote control unit has become low.

Caution for high temperature

- **Leaving the remote control unit in places exposed to direct sunlight for a long time may cause deformation, discoloration or malfunction because of high temperature. Keep the remote control unit in a safe place protected from direct sunlight.**

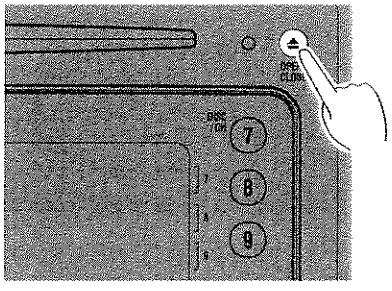
Front panel

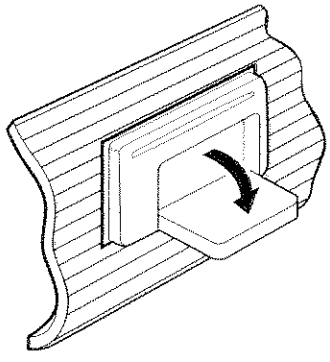
Using open-and-close display

In order to provide a learger, more legible display, the main unit is organized so that the display can be opened and closed. Opening the display, the cassette port is located there.

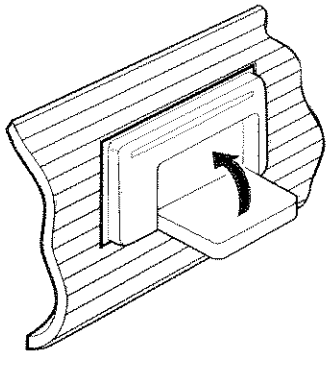
❖ Opening and closing the display

Press the OPEN/CLOSE button opens the display.





Pressing the button again closes the display.



Caution on opening and closing the display

- Do not place objects on the display or forcible press down when it is open, as this may cause malfunction.
- Be careful not to trap your fingers or other objects into the display during the opening and closing operations.

Connecting external equipment to this unit

Connecting external equipment (an RCA-output video deck or DAT) to this unit allows sound from the external equipment to be output.
The external equipment can be connected to this unit by the following two methods:

❖ Connecting the RCA TO IP-BUS INTERCONNECTOR [CD-RB10] to the IP-BUS IN jack located in the rear panel of this unit

> For details on connecting the remote control unit, refer to the RCA TO IP-BUS INTERCONNECTOR manual.
> Set AUX to ON by referring to "AUX (external input) setting" explained below.
> To output sound from the external equipment, switch the sound source to"AUX". [See page 22.]

❖ Using the MIC IN jack located in the front panel of this unit

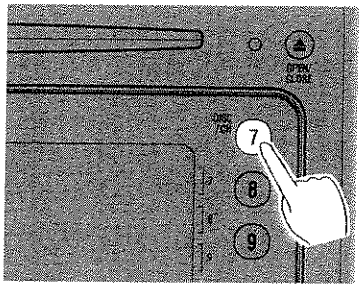
> The external equipment can be easily connected, even after installation of this unit to the vehicle.
> For details of connection and operation, see "Connecting an external device via the MIC IN jack" on page 77.

AUX (external input) setting

Set AUX to ON (initial setting is OFF) when a product that cannot be directly controlled by this unit (external equipment such as RCA output video or DAT) is connected to the IP-BUS IN (blue) jack of this unit. Otherwise, the sound source does not switch to AUX. [See "Switching the sound source" on page 22.]

To switch the AUX setting ON/OFF, turn the ignition switch of the vehicle to ACC or ON while holding down the number button [7].

> The display shows "AUX" when the sound source is changed to AUX.



Display when the source is switched to AUX.

When no external equipment is connected

> Leave the AUX setting in the OFF position.

For more information on connection of the IP-BUS IN jack

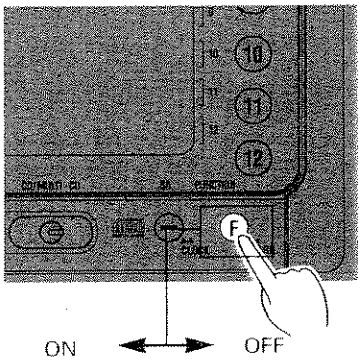
> See "Connection and installation" on page 103 for correct connection.

Number buttons [7] to [12]

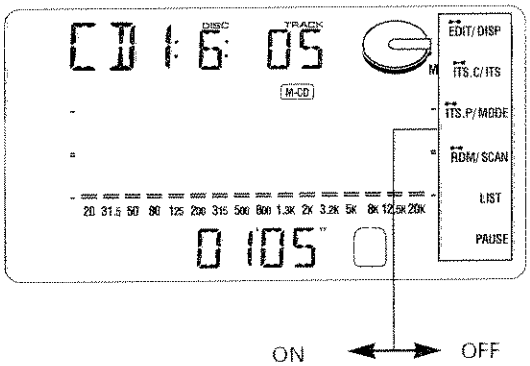
The number buttons [7] to [12] have two functions. The functions switch ON/OFF every time the FUNCTION button is pressed.

Press the FUNCTION button.

The functions switch every time the button is pressed.



Example: Multi-CD operation display



The yellow FUNCTION button indicator lights up (ON).

Each of the number buttons [7] to [12] has an independent function.
The various functions are displayed on the display (key guide).

The orange FUNCTION button indicator lights up (OFF).

For the radio

The number buttons [7] to [12] can be used for presetting broadcasting stations (FM1 band only).

For the multi-CD player

The number buttons [7] to [12] can be used for the disc number search operation (only when using the 12-disc multi-CD player).

Adjusting the contrast of the display

If the display is difficult to see, adjust the contrast (proportion of bright and dark portions).

⚠ CAUTION

To prevent accidents

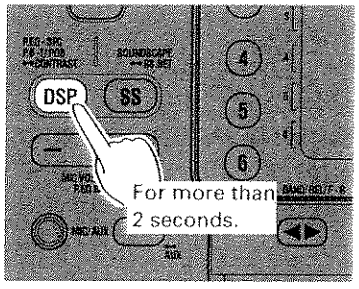
- **So as not to cause a traffic accident, do not attempt to adjust the contrast while driving.**

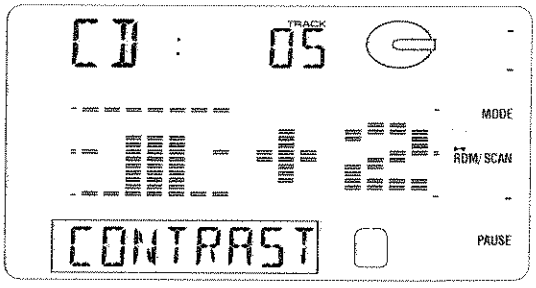
1. Switch the power of this unit ON.

[See "Switching the sound source" on page 22.]

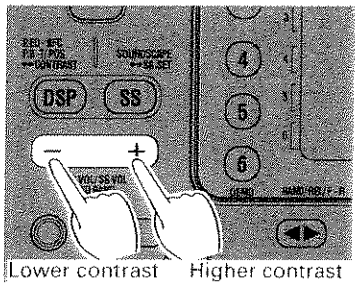
2. Press the DSP button for more than 2 seconds to change to the contrast adjustment display.

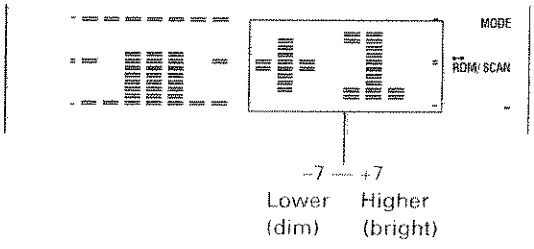
> The contrast adjustment display will be canceled if no operation is made for more than 8 seconds. Perform the adjustment operation within 8 seconds after entering contrast adjustment mode.





3. Press the MIC VOL button to adjust the contrast.





4. When finished making the settings, press the DSP button.

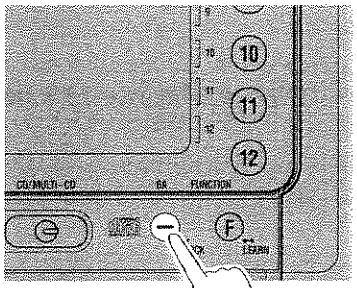
The contrast can also be adjusted during the demonstration display

Using the clock

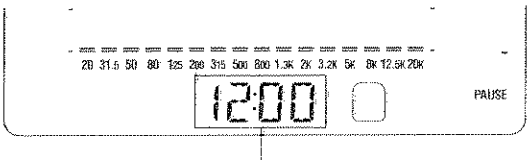
Changing to the clock display

The display can be switched to clock display when the power of this unit is ON.

1. **Switch the power of this unit ON.**
   [See "Switching the sound sources" on page 22.]
2. **The clock display switches ON/OFF every time the SA button is pressed for more than 2 seconds.**



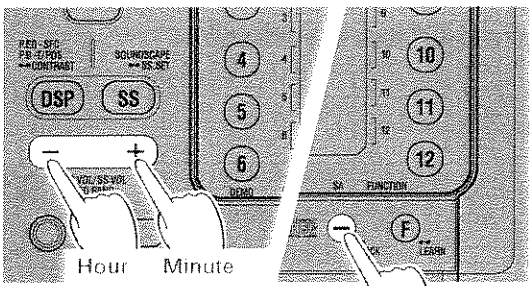
For more than 2 seconds.



Clock display

Adjusting the clock

1. **Switch the power of this unit ON and change to the clock display.**
   [See the previous paragraph.]
2. **Adjusting the clock**



When this button is held pressed, the time can be set using the MIC VOL button.

Adjust the "hours".

Hold down the SA button and press the (–) side of the MIC VOL button to adjust the hours.
Holding down the (–) side of the MIC VOL button continuously forward the hours.

Adjust the "minutes".

Hold down the SA button and press the (+) side of the MIC VOL button to adjust the minutes.
Holding down the (+) side of the MIC VOL button continuously forward the minutes.

> Although the seconds are not displayed, the time starts from 0 second when the SA button is released.

Time display

> If you press another button while the time is displayed, the time display is temporarily shut off and if no button is pressed after approximately 25 seconds, the time display is restored.

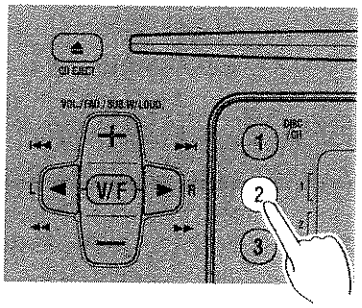
Changing the tuning steps

Setting the AM tuning step

The tuning step of the AM band can be set to 10 kHz or 9 kHz. (The initial setting is 10 kHz.) When the tunre is used outside of North, Central, or South Ametica, set the tuning step to 9 kHz.

1. **Turn the ignition key OFF.**
2. **Each time you turn the ignition key from its OFF to its ON position while continually pressing the number button [2], the AM tuning step is switched between 10 kHz and 9 kHz.**

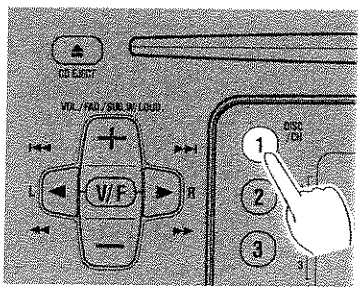
   > When the tuning step is 10 kHz, the frequency range will be from 530 kHz to 1,710 kHz. When it is 9 kHz, the frequency range will be from 531 kHz to 1,602 kHz.



Setting the FM tuning step

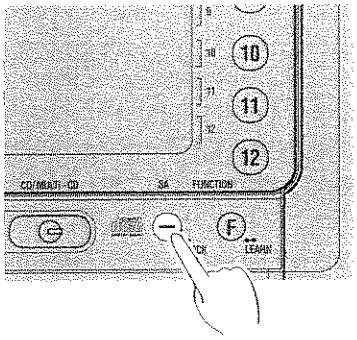
The seek tuning step of the FM band can be set to 100 kHz or 50 kHz. (The initial setting is 100 kHz.)

1. **Turn the ignition key OFF.**
2. **Each time you turn the ignition key from its OFF to its ON position while continually pressing the number button [1], the seek tuning step of the FM band is switched between 100 kHz and 50 kHz.**



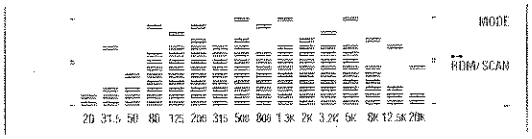
Switching display modes

As shown in the figure below, the spectrum analyzer indicator on the display changes in sequence every time the SA button is pressed.



Peak bound

The sound intensity of each frequency is shown as height.



Symmetric display (1)

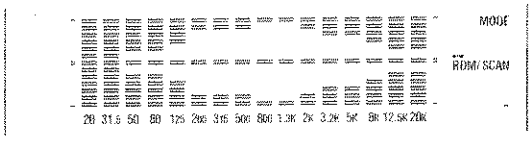
The sound intensity of each frequency is shown as width.

LR independent peak bound

The peak bound for the right speaker is shown separately from that for the left speaker.

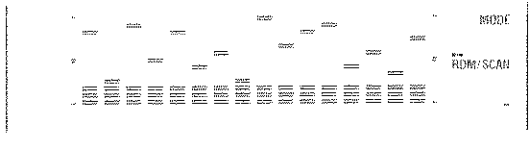
Symmetric display (2)

The same pattern as with symmetric display (1) is shown in reversed bright and dark portions.



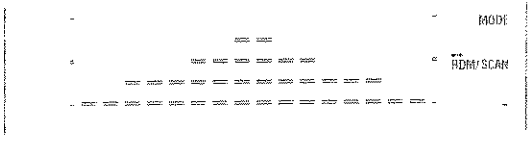
Safety snow

Shows patterns as if snow is falling. See the next page for more detail.



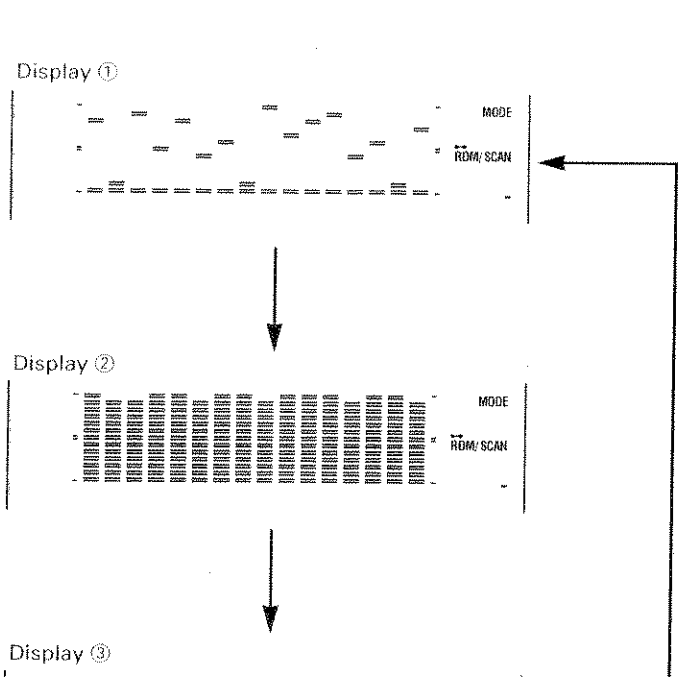
Winding road

Shows patterns as if the spectrum analyzer indicator falls from the above. The speed changes according to the sound intensity.



❖ Safety snow

The safety snow display shows patterns as if snow is falling in the spectrum analyzer indicator (Display ①).
When the snow fills up the indicator (Display ②), the number of fallen snow balls will be displayed (Display ③).
It takes 1 minute from the point when snow fall starts until the spectrum analyzer indicator is filled up with snow. Up to 99 snow balls will be counted. The safety snow display can be used as a timer.



Timer

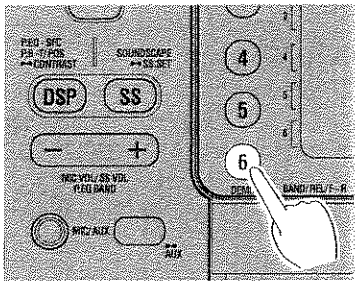
> The safety snow display can be used as a timer. However, the timer will be reset when the power of this unit is switched OFF or the display modes are changed. When another operation (e.g. volume adjustment) is performed during safety snow mode, the timer stops until completion of that operation.

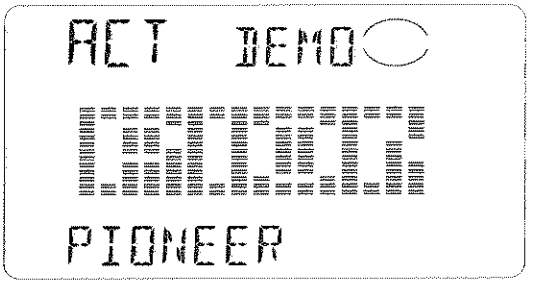
Switching to the demonstration display

The demonstration display can be shown when the power of this unit is OFF.

1. **Switch the power of this unit OFF.**
   [See "Switching the sound source" on page 22.]

2. **Press the number button [6] to start demonstration display.**
   To cancel the demonstration, press the button again.





Precautions when the car engine is stopped

- **Avoid using the demonstration function for a long time while the car engine is stopped. This may consume the car battery.**
- **If demonstration display is left on, once the source is OFF (the power is off), demonstration display begins automatically.**

Cellular MUTE function

If the PIONEER car telephone is connected to your system, the sound volume of this unit automatically reduces while the telephone is used. The volume will automatically resume when the car telephone is switched OFF.

Basic operation

This Chapter explains the most basic operations such as switching the sound source and adjusting the volume. Also, basic operations for using the radio, tape deck, built-in CD player and multi-CD player are introduced.

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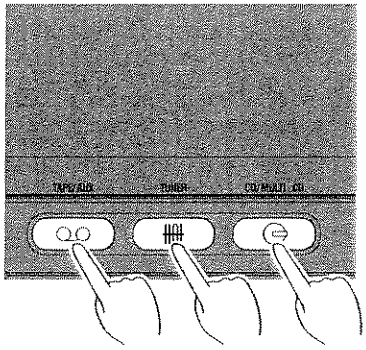
Switching the power ON

Switching the sound source

To change the sound sources in your system, perform the following operation.

Press a corresponding button to switch a sound source ON/OFF.



TAPE button: Tape → AUX* (external input) → Power OFF →

TUNER button: Radio (FM/AM) → Power OFF →

CD button: Built-in CD player → Multi-CD player → Power OFF →

* The sound source does not change to AUX (external input) by the remote control unit.

AUX (external input)

> When an external equipment is used, sound from that external equipment can be output by changing the sound source to AUX. (In such a case, operate the functions at the external equipment.) For details on setting up AUX when external equipment is connected, see page 13.

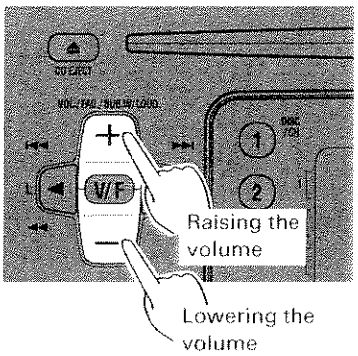
The sound source cannot be switched in these cases

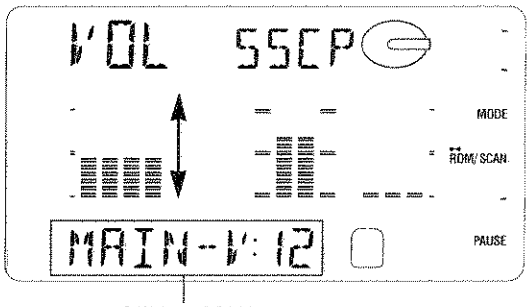
> The sound source is not connected to the system.
> The cassette tape is not loaded on this unit.
> The magazine is not installed in the multi-CD player.
> The CD is not loaded on this unit.
> AUX (external input) has been set to OFF. (See page 13.)

Volume adjustment

Press the +/– button.

Holding down the button allows continuous adjustment to be made.





⚠ CAUTION

Keep the volume to moderate level

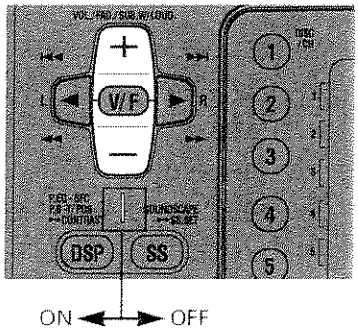
- **For safe driving, keep the sound volume to moderate level so that you can hear the sound outside the car.**

⊘ Precautions for low battery

- **Do not use this unit at high sound level for a long time when the car engine is turned OFF or during idling.**

❖ +/– button indicator

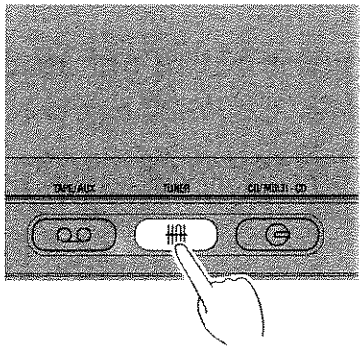
The +/– button indicator goes off when the +/– button is functioning for volume adjustment. The indicator lights up when the +/– button is used for other functions.

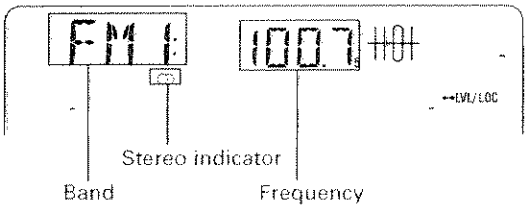


Listening to the radio

Switching the radio ON/OFF

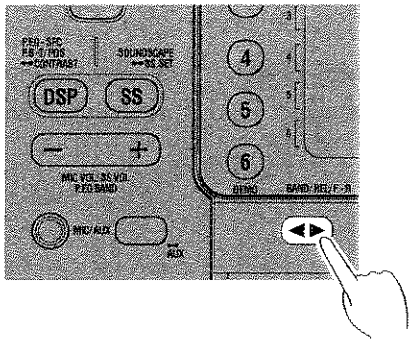
Press the TUNER button and change the sound source to the radio.





Selecting a band

The band changes in the following sequence every time the BAND button is pressed.



The FM frequency band

> The FM band is replicated into FM1 and FM2. This enables one memory button to store the reception frequencies for three radio stations. The reception frequency range is the same for bands 1 and 2. [See page 56 for storing radio station frequencies in memory.]

Receiving stereo broadcasting

> Stereo indicator "⬚" lights up on the display when the system receives FM stereo broadcasting.

Tuning in to a station

Broadcasting stations can be tuned in by two methods.

Seek tuning

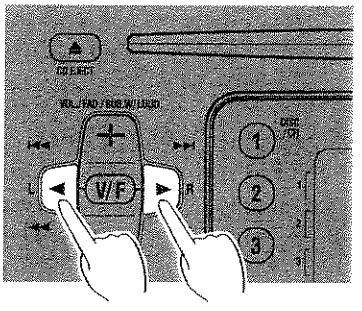
The system automatically tunes in to stations that have higher level than a specified intensity of radio wave.

Manual tuning

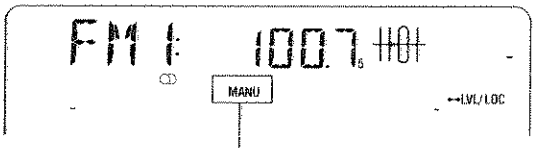
Stations can be selected by manually adjusting the frequency. Use this function when you want to tune in to a station that has too low level for seek tuning mode.

> Although the remote control unit cannot be used for switching between the two modes, it can be used for tuning in to stations.

1. Seek tuning mode switch to manual tuning mode and vice versa every time the ◄/► button is pressed at the same time.



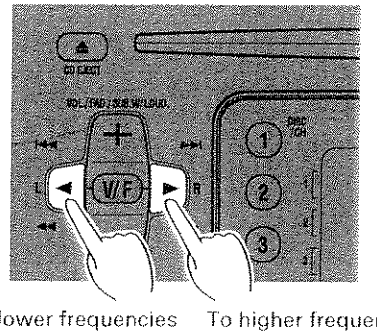
Press simultaneously.



MANU ON
Manual tuning mode

MANU OFF
Seek tuning mode

2. Press the ◄/► button to select a station.



To lower frequencies To higher frequencies

During seek tuning

The system automatically tunes in to a station. To cancel seek tuning mode, press the button again during seek tuning.

During manual tuning

Holding down the button fast forwards the frequency.

Useful functions

The system has useful functions such as BSM (Best Stations Memory) and preset scan. BSM automatically stores broadcasting stations that are in good receiving condition during driving. Using preset scan allows you to store your favorite stations and call them in sequence. Try some of these useful functions to create your new car-audio life. [See page 55.]

Listening to cassette tapes

Before listening to a cassette

Handling cassettes

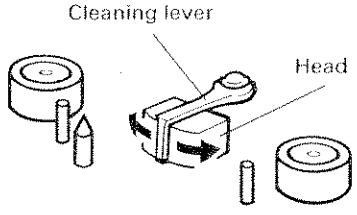
- Keep cassettes away from magnets and other sources of magnetism.
- Do not leave cassettes in direct sunlight.
- When a cassette is not in use, do not leave it out, but return it to its box for storage.

Before inserting a cassette

- Do not insert a cassette whose label is peeling or coming unstuck at any point. If the label catches in the mechanism, the cassette will not eject. Remove a peeling label completely before using a cassette.
- Do not use C-120 (120 min.) tapes. Because the tape is exceptionally thin it stretches, giving poor performance.

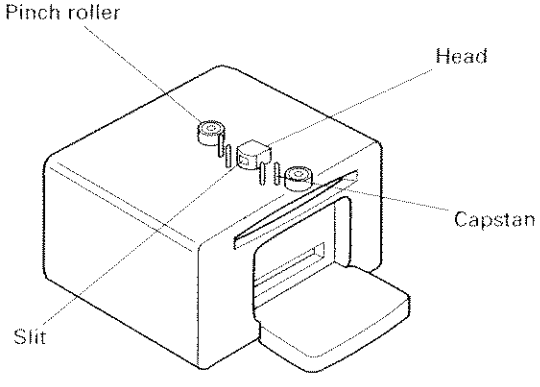
❖ Automatic tape head cleaning (auto head cleaning mechanism)

This unit incorporates an automatic tape head cleaning mechanism.
When the pate switches from side A to side B, the tape head cleaning lever moves onto the head, keeping the head free of dirt.



If the sound quality deteriorates

- If the heads become dirty, the sound quality will deteriorate and there will be sound dropouts and other imperfections in performance. If this happens, it is possible that some dirt is stuck to the head that the cleaning lever is unable to remove. In this case, the head must be cleaned manually.
- The head is located on the right side of the tape slot, approximately halfway between the front of the unit and the back.



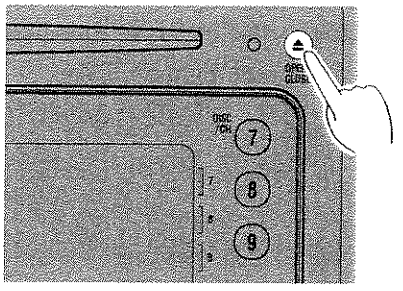
Caution when cleaning

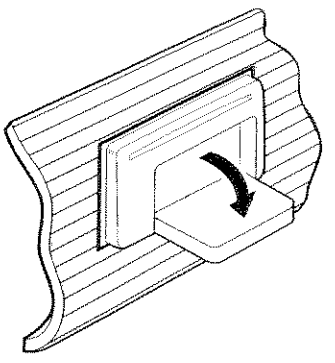
- Don't use metal or a magnet on the head. Never use tweezers or pilers wrapped with cotton or gauze. This can scratch the head.
- When using a cleaning tape, play it once on one side for normal cleaning. Excessive use of the cleaning tape will increase head wear. Be sure to read the cleaning tape instructions before use.

Cassette tape playback ON/OFF

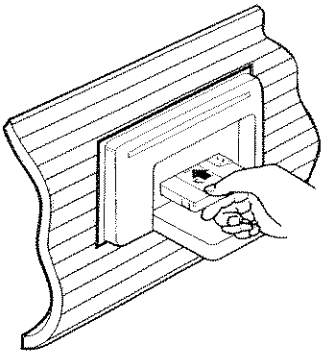
❖ Loading the cassette tape

1. **Press the OPEN/CLOSE button to open the display.**

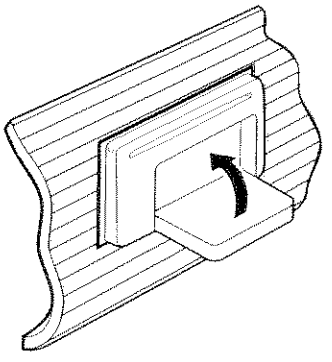


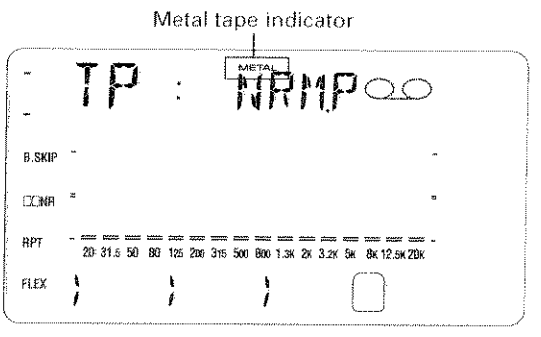


2. **Insert the cassette tape halfway.**



3. **The display automatically closes and the system starts playback.**





When the cassette tape is loaded

> Playback of the cassette tape can be switched ON/OFF by pressing the TAPE button (Switching the sound source). [See page 22.]

When an improper tape is loaded

> If a broken or entangled tape is loaded, the system does not start playback and switches the power OFF. In such a case, check the cassette tape.

Metal tape indicator (auto tape selector)

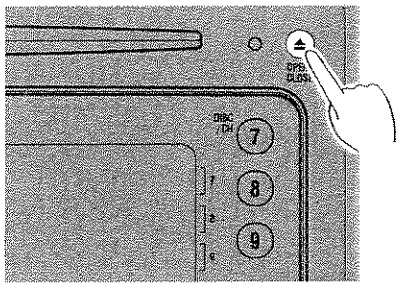
> When the cassette tape is loaded, the system automatically detects the tape type (metal/chromium dioxide or normal) and sets the playback equalizer to either 70 or 120 µs according to the tape type. When a metal or chromium dioxide tape is used, the "METAL" indicator lights up on the display.

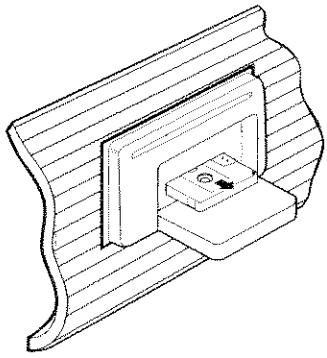
❖ Removing the cassette tape

⚠ CAUTION

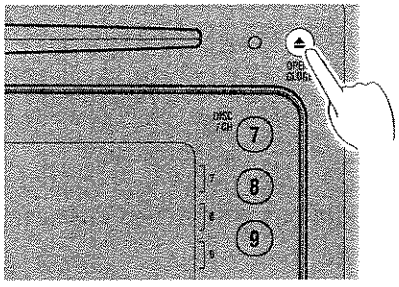
- Leaving the display open may hinder safe driving. Keep the display closed under normal conditions.

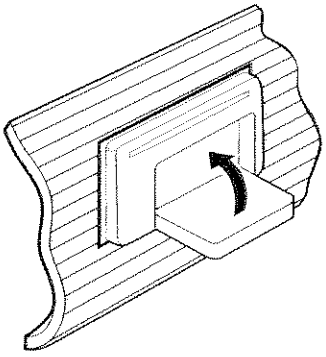
1. **Press the OPEN/CLOSE button to remove the cassette tape.**
   The display automatically opens and ejects the tape.





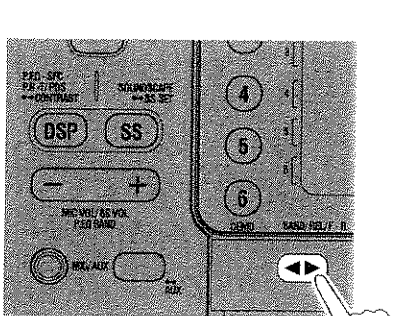
2. **Remove the cassette tape.**
3. **Press the OPEN/CLOSE button to close the display.**

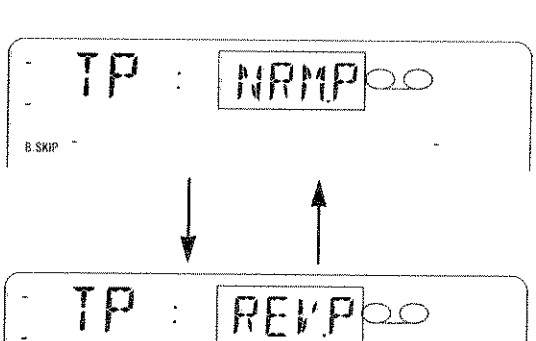




Switching between sides A and B (direction)

Pressing the BAND button switches between sides A and B.





Dolby NR system

Dolby-B NR and Dolby-C NR systems both reduce hiss noise from tapes.

> Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

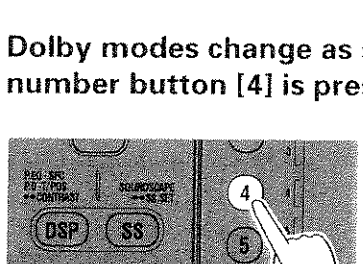
Dolby-B NR

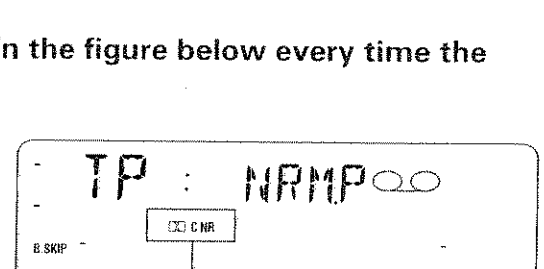
Turn the Dolby-B by NR ON while playing tapes recorded with Dolby-B NR ON.

Dolby-C NR

Turn the Dolby-C NR ON while playing tapes recorded with Dolby-C NR ON.

Dolby modes change as shown in the figure below every time the number button [4] is pressed.





Useful functions

Music search detects the beginning of a track. Blank skip automatically searches for the beginning of the next track when blank (containing no sound) continues for more than 12 seconds. Try some of these useful functions to create your new car-audio life. [See page 60.]

Using the built-in CD player

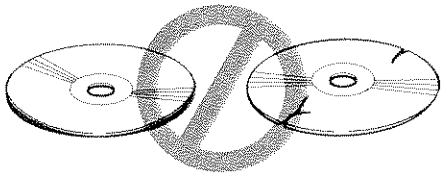
Discs

Usable discs

- Only use compact discs (optical digital audio discs) bearing the mark shown below.

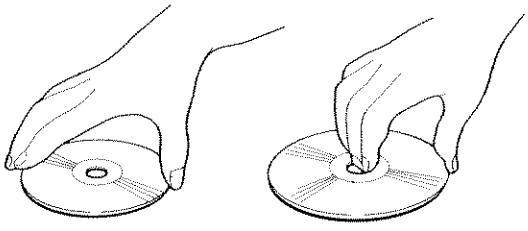
COMPACT disc DIGITAL AUDIO

- Do not use cracked or warped discs.

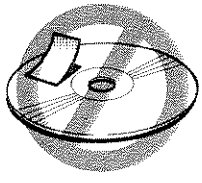


Handling

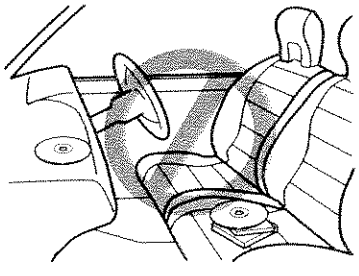
- Never touch the recorded surface when handling discs. Handle discs by carefully holding the outer edges or the edges of the hole and the outer edge.



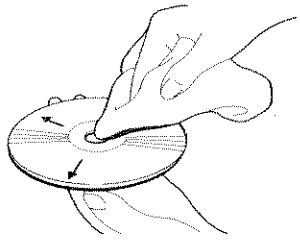
- Do not affix paper or tape, and protect the disc from scratches.



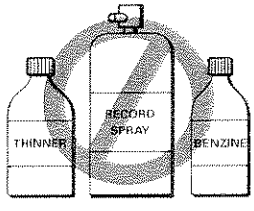
- Do not store in places exposed to direct sunlight.



- If the recorded surface of the disc gets soiled, the sound quality may be reduced. To clean the disc, gently wipe the surface with a soft lint-free cloth, wiping from the center of the disc to the edge.



- Do not use record sprays or antistatic agents. Volatile chemicals such as benzine and thinner can also damage the surface of the disc and should not be used.



- To avoid warping, keep the discs in their cases.

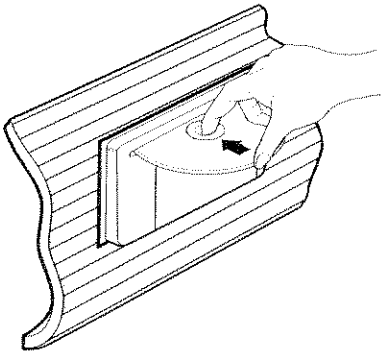
Built-in CD playback ON/OFF

❖ When no disc is Loaded

Before loading the disc

- Confirm that no disc is loaded, then load the disc.
- Do not insert two discs at a time. This will cause a malfunction.
- This unit is capable of playing back 8-cm CDs without an adapter. Do not use an adapter when loading an 8-cm CD. If an adapter is used, it can come off and the disc may not be removed.

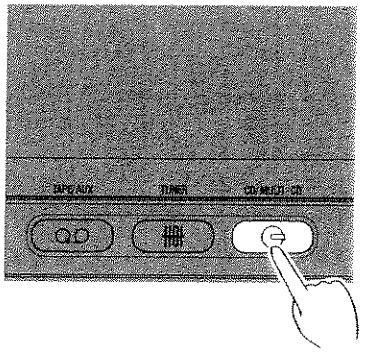
When the disc is inserted halfway, it is automatically loaded and the system starts playback.

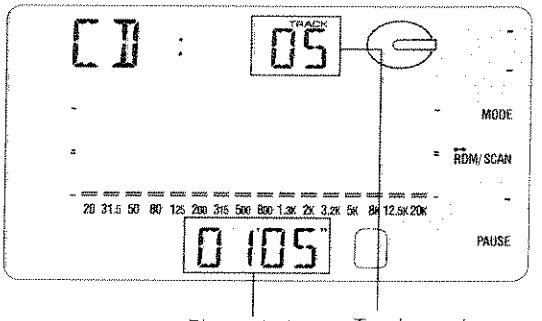


Insert the disc with the recorded surface down.

❖ When the disc is loaded

Press the CD button to change the sound source to built-in CD player.



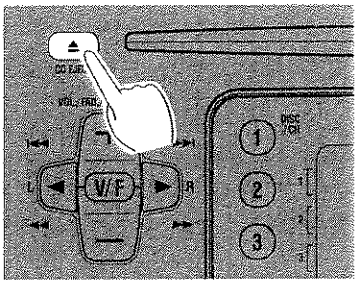


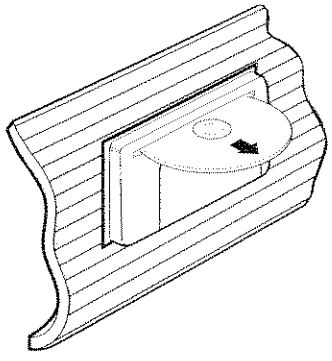
If the disc inserted with the recorded surface up

> The disc will be automatically ejected.

❖ Removing the disc

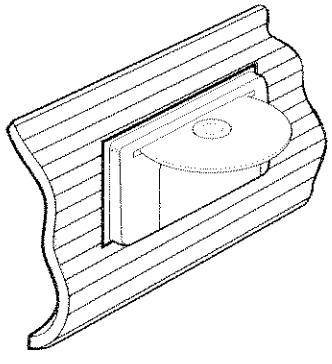
Pressing the CD EJECT button ejects the disc.





Store the disc in a safe place immediately after ejection.

- **Do not leave the disc as shown in the figure above for a long time. This will cause distortion to the disc. Do not drive with an 8-cm CD inserted halfway into the player. The disc may fall off through vibration from driving.**

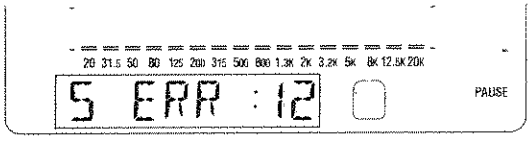


When loading an improper CD

> If a CD is inserted and stops in the middle or if a CD is loaded but the system does not start playback, that disc may be defective. In such a case, check the disc.

Error display

> The display shows an error code, if the CD player does not operate properly. In such a case, check the meaning of the error by referring to the "CD player error display" on page 114.



Environment for CD playback

> When driving on roads in poor conditions or over joints, the system may skip sound because of excessive vibration.

> If CD playback is performed immediately after switching the heater ON in a very low temperature, the disc or the optics inside this unit (prism, lens, etc.) will get fogged and may result in improper playback operation. Wipe the disc if it is fogged. If the optics inside this unit is fogged, leave the unit for one hour after switching the heater ON. The fogging will be naturally removed and the unit will operate properly.

HEAT display

> To prevent a malfunction, the CD player automatically stops playback when the temperature inside the player gets too hot. In such a case, the display shows "HEAT". The system resumes CD playback when the internal temperature decreases to normal level.

Selecting music (track search) and fast forward/reverse

Track search mode

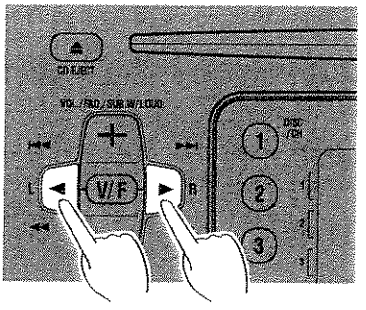
When the unit is in track search mode, music can be selected by its track number.

Manual search mode

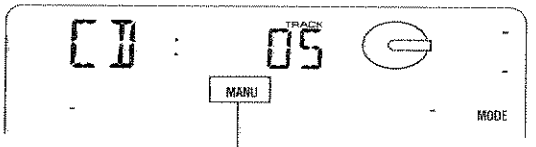
When the unit is in manual search mode, fast forward/reverse may be performed.

> Switching between these two modes cannot be performed by the remote control unit. Selecting music can be performed by the remote control unit.

1. To switch between the modes, press the both sides of the ◄/► button simultaneously.



Press simultaneously.

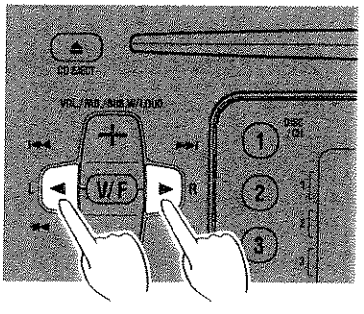


MANU ON ◄——► MANU OFF

Manual search mode — Track search mode

2. Press the ◄/► button to operate.

Holding down the button continuous the operations.



To the previous track ◄ Reverse

To the next track ► Fast forward

Track search mode

Manual search mode

Useful function

Repeated playback allows the same track to be played back repeatedly. Try some of these useful functions to create your new car-audio life. [See page 63.]

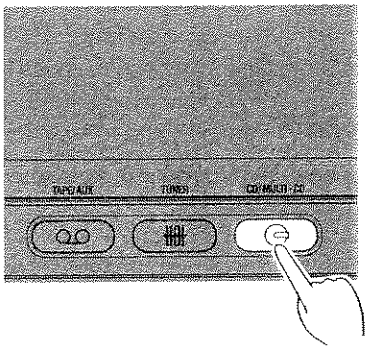
Using the multi-CD player

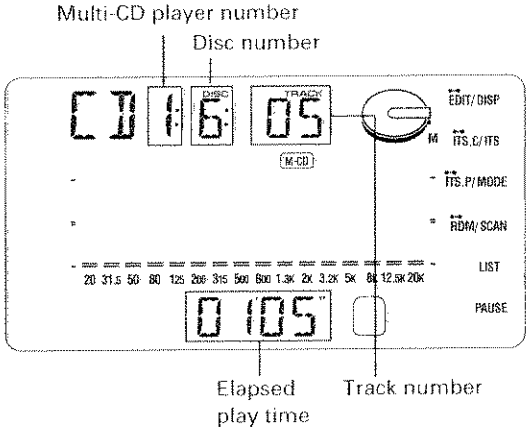
When the multi-CD player (for example, CDX-P1200 and CDX-P600) is connected to your system, the player can be controlled by this unit. (A maximum of four multi-CD players can be connected. In this case the optional MULTIPEL INSTALLATION ADAPTOR (CD-P44) is required.)

Multi-CD playback ON/OFF

1. **Confirm that the magazine is loaded in the multi-CD player.**
   (See the owner's manual of the multi-CD player.)

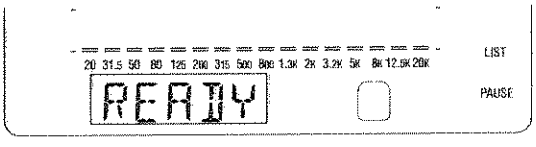
2. **Press the CD button to switch the sound source to multi-CD player.**





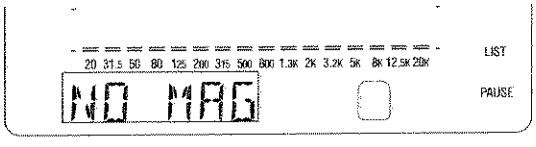
When the multi-CD player warms up

> The multi-CD player may warm up (checking the existence of disc, reading disc information, etc.) after the power is switched ON or when the disc to be played back is changed. During warm-up, the display shows "READY".



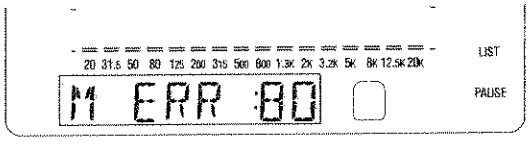
When no magazine is loaded in the multi-CD player

> The power of this unit does not switch OFF and the display shows "NO MAG". To prevent battery consumption, always switch the power of the system OFF when no CD playback is performed. (The system resumes CD playback when the magazine is loaded again.)



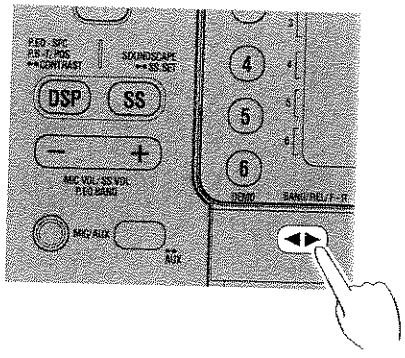
Error display

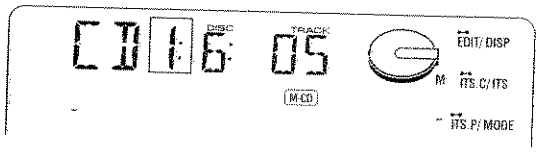
> The display shows an error code, if the multi-CD player does not operate properly. In such a case, check the meaning of the error by referring to the owner's manual of the multi-CD Player.



Selecting a multi-CD player — When using more than one multi-CD players —

The multi-CD player number changes in sequence every time the BAND button is pressed.





Selecting discs (disc number search)

Disc number search can be performed by the following two methods.

Directly specifying disc numbers (by this unit)

Select disc numbers by using the number buttons [1] to [12] on the player.

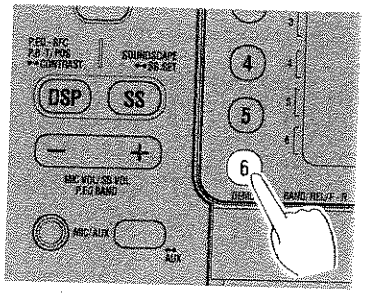
Forward/reverse (by the remote control unit)

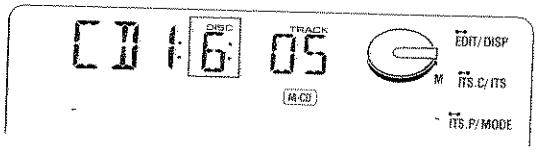
Select disc numbers by using the disc number forward/reverse function.

❖ Directly specifying disc numbers

Press a number button corresponding the desired disc number.

> When a 12-disc multi-CD player is used, switch the FUNCTION button OFF (orange indicator lights up) before selecting disc numbers 7 to 12. [See page 14.]





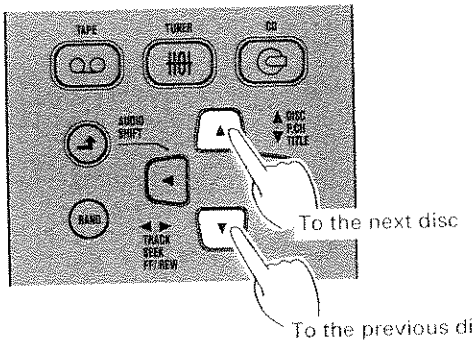
When a 6-disc multi-CD player is used

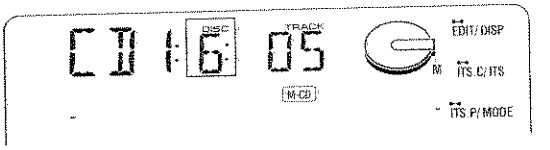
> The FUNCTION button cannot be switched ON/OFF. The FUNCTION button remains ON (yellow indicator lights up).

❖ Forward/reverse (remote control unit only)

Press the ▲/▼ button to forward/reverse the disc numbers.

> If the system encounters a disc number of unloaded disc, that number will be skipped and the next disc number will be selected.





Selecting music (track search) and fast forward/reverse

Song selection (track search) and fast forward/reverse are performed in the same manner as with built-in CD playback. See page 33.

Useful functions

Repeated playback allows the same track (or the same disc in case with multi-CD player) to be played back repeatedly. The ITS (Instant Track Selection) function plays back programmed tracks only. Try some of these useful functions to create your new car-audio life. [See page 66.]

6. **After specifying a track, press the SS button.**

   The system starts SOUNDSCAPE playback.

   > If the multi-CD is used for the main source and MUSIC-MODE is specified, the multi-CD will pause and only the subsource (built-in CD) will be played back for approximately 10 seconds. After that, pause on the multi-CD will be automatically released and the system starts playback from the beginning of the track.

For customers using this system with the multi-CD player

With the following operation with MUSIC-MODE set, after the audio of a subsource (built-in CD) plays for 10 seconds, play can start with the beginning of audio on the main source (multi-CD).

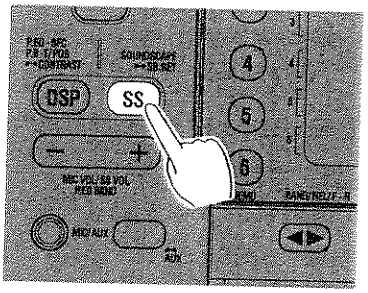
1. **Check that the SOUNDSCAPE setting is MUSIC-MODE and that SOUNDSCAPE is ON.**

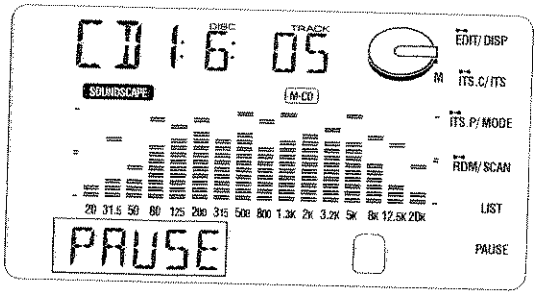
2. **Turn the power OFF.**

3. **Press the SS button and the power comes on and SOUNDSCAPE play begins.**

   > During the 10 seconds of play from the subsource only, the multi-CD is paused. Once the 10 seconds has elapsed, the multi-CD pause is canceled and the audio from the two sources are mixed.

   > If you remove the disc from the built-in CD player during the 10 seconds of play from the subsource only, SOUNDSCPAE is canceled but the multi-CD pause is not canceled.





Using the DSP function together with SOUNDSCAPE

Using the DSP function together with SOUNDSCAPE provides more real sound field. This is a worthy effect to try. For details of the DSP function, see page 79.

Example: Live version

The following setting adds applause between tracks, whereby a sound field that makes you feel as if you are really in a concert stadium.

1. **Set the supplied CD software for the subsource. [See page 31.]**

2. **Set the software (cassette tape or CD software) containing rock music for the main source. [See page 27.]**

3. **Select ROCK from factory mode of P.EQ. [See page 85.]**

4. **Select STADIUM from the SFC. [See page 83.]**

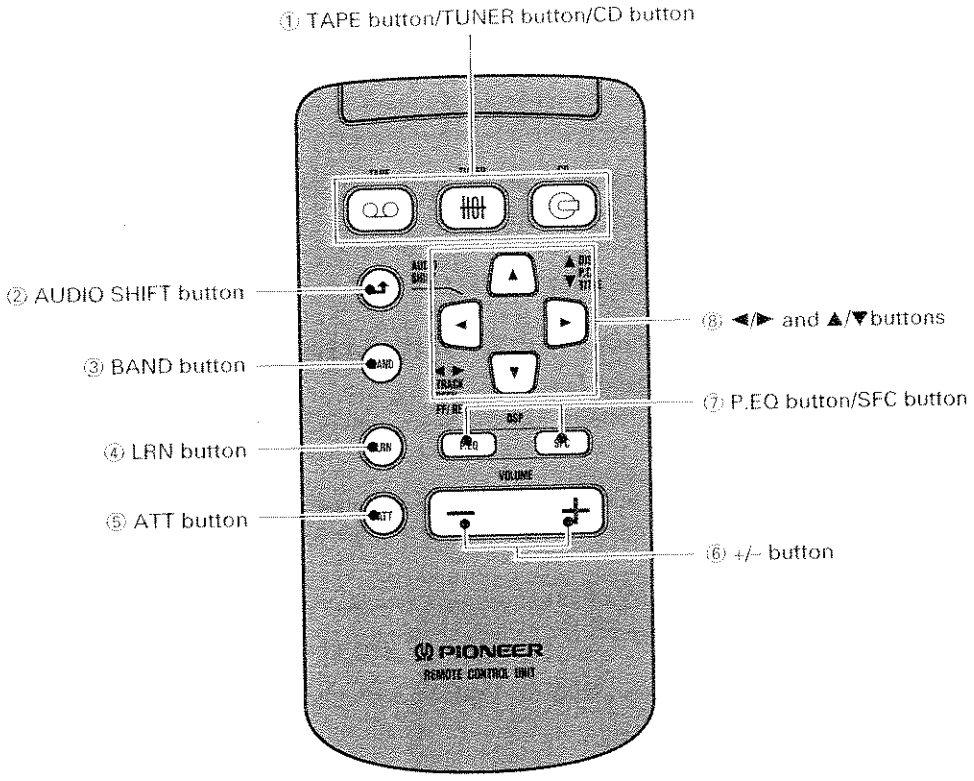
5. **Set SOUNDSCAPE to BLANK-MODE. [See page 48.]**

6. **Set the track setting of the subsource to "CHEER 2". [See page 48.]**

7. **Start up SOUNDSCAPE. [See page 46.]**

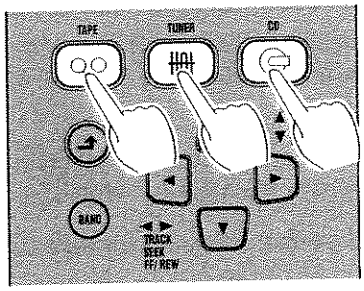
Operations using the remote control unit

The operations than can be performed using the remote control unit are explained here for each button.



① TAPE button/TUNER button/CD button

Press a corresponding button to switch a sound source ON/OFF.



TAPE button : TAPE → Power OFF

TUNER button: Radio (FM/AM) → Power OFF

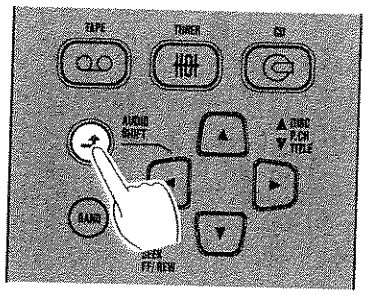
CD button : Built-in CD → Multi-CD → Power OFF

The sound source cannot be switched in these cases

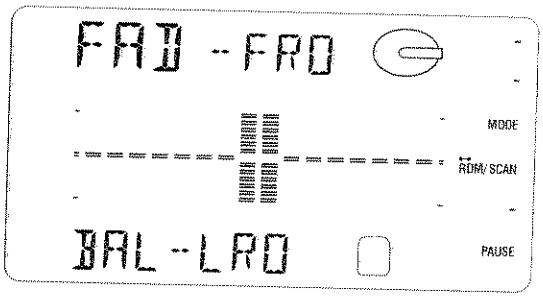
- The sound source is not connected to the system.
- The cassette tape is not loaded on this unit.
- The CD is not loaded on this unit.
- The magazine is not installed in the multi-CD player.

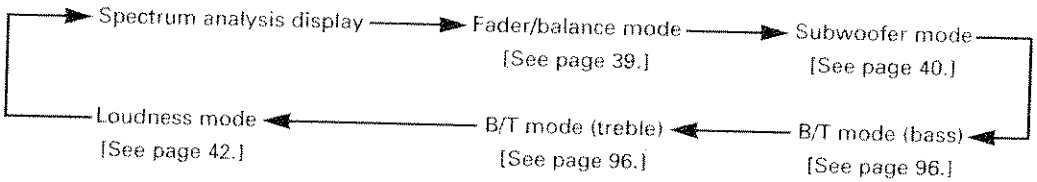
② AUDIO SHIFT button

Pressing the AUDIO SHIFT button can call the following modes



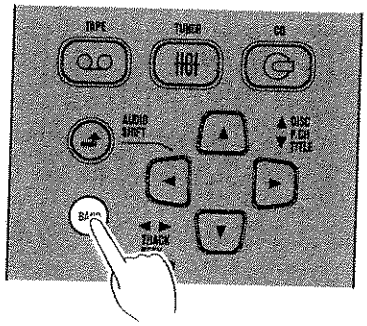
Example: Fader/balance mode





③ BAND button

The following operations can be performed with the BAND button, depending on the playback source.

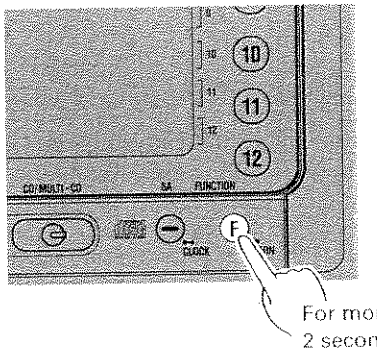


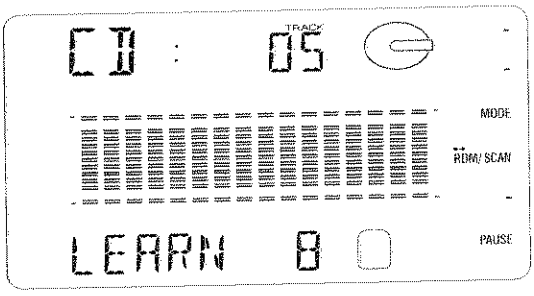
Source	Operation	See:
Radio	Selecting a band	24
Tape	Switching between sides A and B	29
Built-in CD		–
Multi-CD	Selecting a multi-CD player	35

④ LRN button

One of the buttons of the player can be stored to the LRN button of the remote control unit. A useful function to store a button that is used often.

1. Hold down the FUNCTION button for more than 2 seconds to enter LEARN mode.

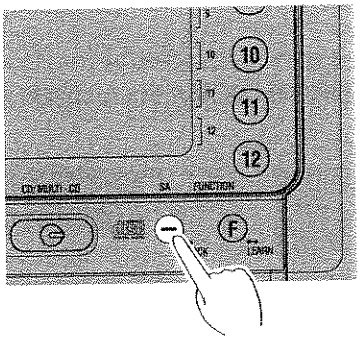




2. Press the button to be stored.

Press the button of the player to be operated by the remote control unit.

> Functions that require pressing a button for more than 2 seconds will not be stored in memory.



3. Press the LRN button of the remote control unit to confirm storage.

From the next operation, the LRN button of the remote control unit can be used to perform the operation of the stored button of the player.

Storage operation of the LEARN function

> Store a function to the LRN button within 8 seconds after entering LEARN mode. LEARN mode will be canceled if no operation is made for more than 8 seconds.

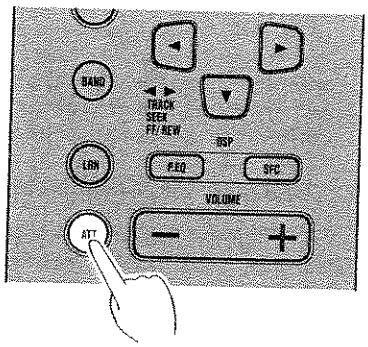
> To replace the stored function, perform steps 1 to 3 mentioned above again.

⑤ ATT button

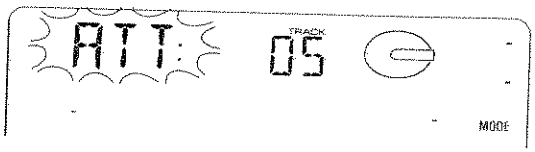
At such times as when it is difficult to hear the conversation inside the car or stopping at a toll both, the volume can be temporarily cut to a minimum level by pressing the ATT button. (This cannot be done from the remote control unit.)

Press the ATT button to reduce the volume to 1/10 its persent level.

Press it again and the original volume is restored.



Flash



⑥ +/– button

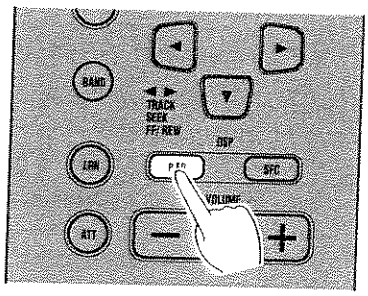
The +/– button of the remote control unit can be used to adjust the volume in any mode. Using the remote control unit is convenient for adjusting the volume in modes where the volume cannot be controlled from the player itself.

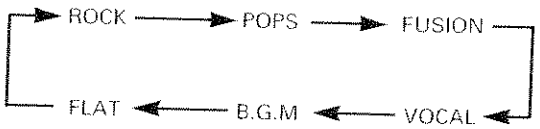
⑦ P.EQ button/SFC button

The P.EQ button/SFC button is used to call equalizer curves previously stored in memory for the sound field program and factory mode from the DSP/P.EQ modes of the DSP functions in the following sequence with a single touch of the button.

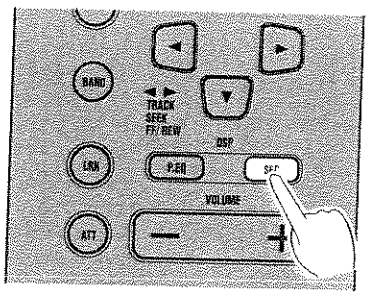
» Pressing the P.EQ button/SFC button switches between P.EQ and SFC mode. In P.EQ or SFC mode the functions of the source (repeat play, etc.) are disabled. When finished with an operation, pressing AUDIO SHIFT button switches to spectrum analysis.

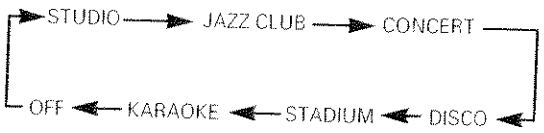
❖ With the P.EQ button





❖ With the SFC button





⑧ ◄/► and ▲/▼ buttons

The following functions can be performed using the ◄/► and ▲/▼ buttons, depending on the source and the mode.

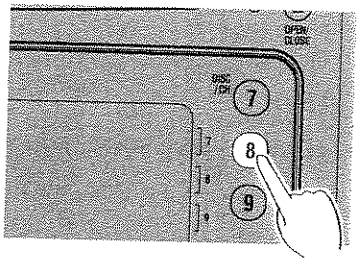
Mode			Button	Operation	See:
Volume/sound quality adjustment modes	Volume adjustment mode		◄/► button	Those that can be performed for each source	–
			▲/▼ button	Those that can be performed for each source	–
	Fade/balance mode		◄/► button	Balance level adjustment	39
			▲/▼ button	Fader level adjustment	39
	Subwoofer mode		◄/► button	Select subwoofer output frequency	40
			▲/▼ button	Adjust subwoofer output level	41
	Loudness mode		◄/► button	Switch loudness ON/OFF	42
			▲/▼ button		–
	SLA mode		◄/► button		–
			▲/▼ button	Output level adjustment	43
Sources (spectrum analyzer)	Radio		◄/► button	Tuning in to a station	25
			▲/▼ button	Calling the stored stations	58
	Tape		◄/► button	Fast forward/rewind and music search	60
			▲/▼ button		–
	Built-in CD		◄/► button	Selecting music and fast forward/reverse	33
			▲/▼ button		–
	Multi-CD		◄/► button	Selecting music and fast forward/reverse	33
			▲/▼ button	Forward/reverse	36
DSP modes	DSP/P.EQ mode	Nuance control adjustment	◄/► button		–
			▲/▼ button	Level adjustment	89
		Parametric equalizer adjustment	◄/► button	Frequency adjustment	91
			▲/▼ button	Level adjustment	91
	B/T mode		◄/► button	Bass/treble frequency adjustment	97
			▲/▼ button	Bass/treble level adjustment	97
	POS mode		◄/► button		–
			▲/▼ button		–

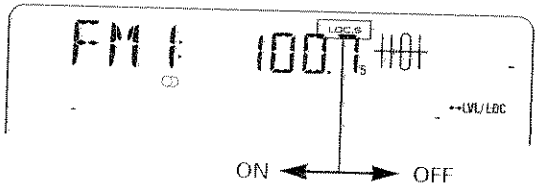
Adjusting reception sensitivity (local seek tuning)

In local mode, the seek tuning reception threshold becomes higher, restricting selection to radio stations with relatively strong signals. This function is convenient for example at night or, when signals from many stations are received weakly but with so much noise that they are selected during seek tuning.
The sensitivity level in local mode can be adjusted in 4 steps for FM and 2 steps for AM.

❖ Switching to local mode

Press the number button [8] to switch local mode ON/OFF.

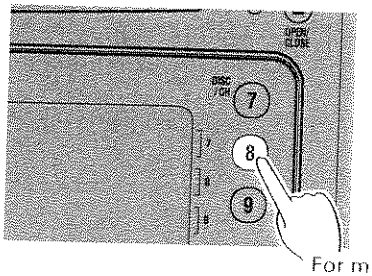




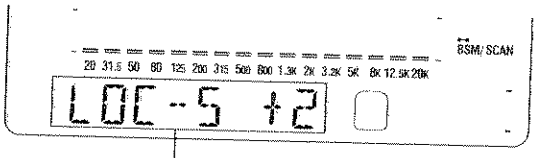
❖ Adjusting the sensitivity level in local mode

1. **Hold down the number button [8] for at least 2 seconds to switch to sensitivity level adjustment mode.**

Pressing the button again cancels the function. If no level adjustment is performed for about 5 seconds, the function is automatically canceled.



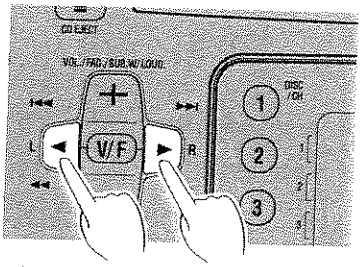
For more than 2 seconds.



The current sensitivity level is displayed.

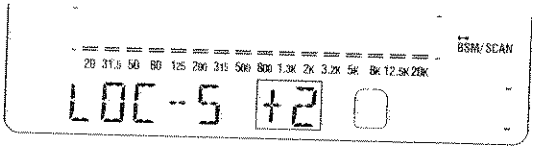
2. **Adjusting the sensitivity level with the ◄/► button.**

FM can be adjusted to one of 4 levels (+1 — +4), and AM can be adjusted to one of 2 levels (+1 and +2). The higher the level, the higher the signal threshold for station selection. Choosing a low level allows reception from radio stations with weak signals.



To a lower sensitivity level

To a higher sensitivity level



Programming radio stations

For FM1, 12 broadcasting stations can be stored to the number buttons [1] to [12].
For FM2 and AM, 6 stations can be stored to the number buttons [1] to [6].
Stations can be stored by the following two methods:

Storing the currently receiving station (preset memory)

Tune in to a desired station by seek tuning or manual tuning, then store the station.

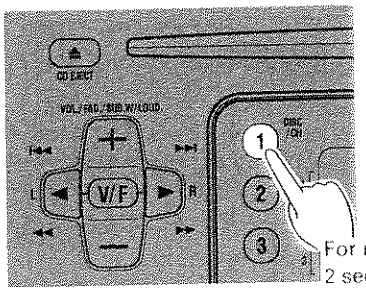
Automatically storing 6 stations (12 stations for FM1) (BSM: Best Stations Memory)

The system automatically tunes in to 6 stations with stronger radio wave in the selected band, and stores them to the number buttons [1] to [6] ([1] to [12] for FM1).

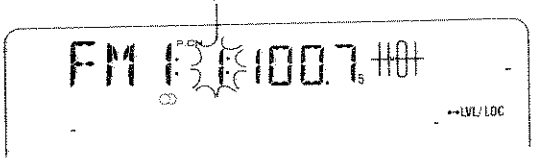
❖ Storing the currently receiving station (preset memory)

1. **Select a band.**
   [See page 24.]
2. **Tune in to a station to be stored.**
   Use seek tuning or manual tuning to tune in to a station to be stored. [See page 25.]
3. **Press the number buttons [1] to [6] for more than 2 seconds. (For FM1, stations can also be stored to the number buttons [7] to [12]. Confirm that the FUNCTION button is OFF [orange indicator lights up].)**

Example: Storing a station in memory the number button [1]



Stop flashing when writing to memory is completed.



When a station is already stored on a button

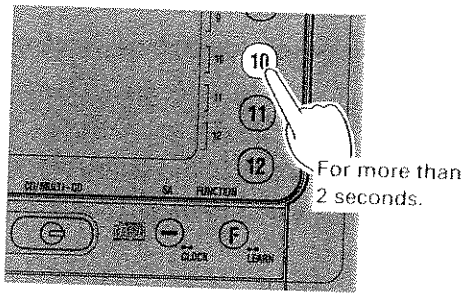
> The old station will be replaced by the new station.

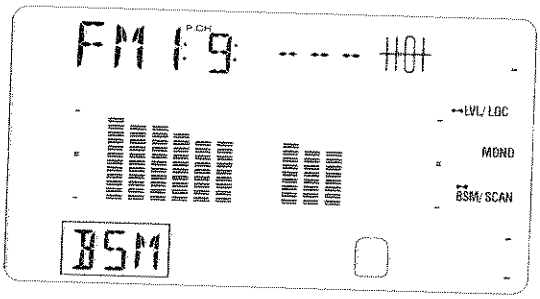
❖ Automatically storing 6 stations (12 stations for FM1) (BSM: Best Stations Memory)

1. **Select a band.**
   [See page 24.]

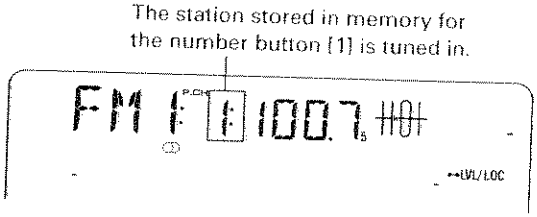
2. **Confirm that the FUNCTION button is ON (yellow indicator lights up), then hold down the number button [10] for more than 2 seconds. The system starts BSM.**

   The system automatically tunes in to 6 stations with stronger radio wave in the selected band, and stores them to the number buttons [1] to [6] ([1] to [12] for FM1). To cancel BSM, press the number button [10] again during BSM operation.





3. **When all stations are stored, the system receives signal of preset number 1.**



BSM function

> Stations are stored to the number buttons [1] to [12] for FM1, and to the number buttons [1] to [6] for FM2 and AM, in the sequence from the strongest level of radio wave.
> If there is not enough stations with strong radio wave (6 stations for FM2/AM and 12 stations for FM1), the previous data may remain.
> BSM operation may take nearly 30 seconds in the areas where there are a few stations with strong radio wave.

Tips for the BSM function

> For the FM band, FM1 and FM2 are available. Store stations that you may listen often to FM1. When you drive in areas far from your home on holiday or business trip, switch to FM2 and use the BSM function. In this way, you can enjoy FM broadcasting in other areas without deleting the data stored on FM1.
> Information of stored stations and corresponding preset numbers can be easily obtained by performing preset scan tuning after completion of BSM operation. [See page 59 for preset scan tuning.]

Calling the stored stations

Stored stations can be called by the following three methods:

Directly specifying a preset number (preset tuning-1)

Press a number button ([1] to [6] for FM2 and AM, [1] to [12] for FM1) to call a preset number. (This operation cannot be performed by the remote control unit.)

Selecting a station by the forward/reverse function (preset tuning-2)

Call a station by using the ▲/▼ button of the remote control unit to forward/reverse the stored stations.

Calling the stations in sequence (preset scan tuning)

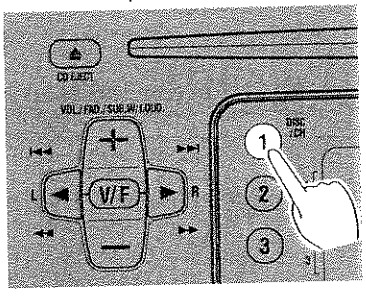
The system call the stations stored on the preset numbers for approximately 8 seconds, respectively. A useful function to search a desired station or to check the stored stations.

❖ Directly specifying a preset number (preset tuning-1)

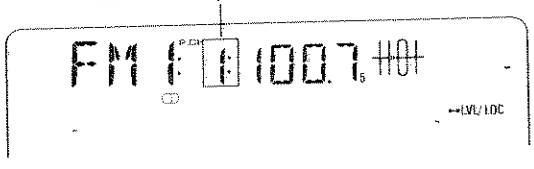
Select a preset number by using the number buttons [1] to [6] ([1] to [12] for FM1). (When selecting preset numbers 7 to 12 for FM1,confirm that the FUNCTION button is OFF [orange indicator lights up].)

Press the desired preset number to call the station.

Example: Recalling the station stored in preset number 1.



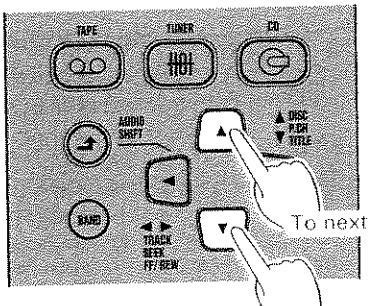
The selected preset number is called.



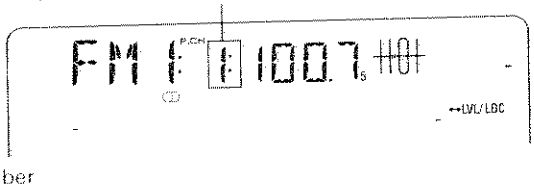
❖ Selecting a station by the forward/reverse function (preset tuning-2)

Press the ▲/▼ button of the remote control unit to forward/reverse the preset numbers.

Holding down the button continuously forward/reverse the preset numbers. (This operation can only be performed by the remote control unit.)



Switches from one preset number to the next.



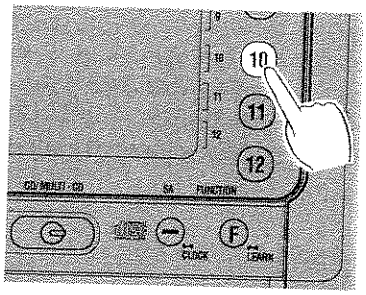
To next preset number

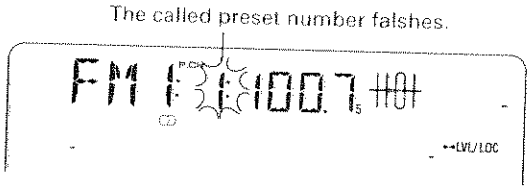
To previous preset number

❖ Calling the stations in sequence (preset scan tuning)

1. Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [10] to start preset scan tuning.

The system calls the stored stations for approximately 8 seconds, respectively.

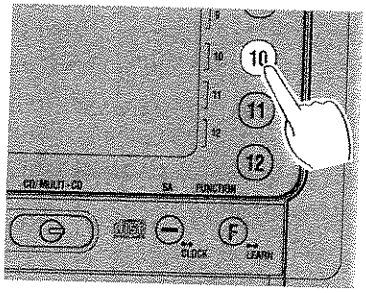




2. When the desired station is called, press the number button [10] again to cancel preset scan tuning mode.

The tuner will then remain tuned to the current station.

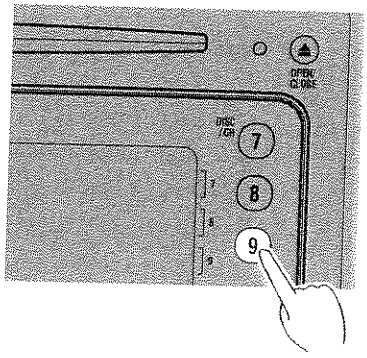
> Preset scan tuning operation will continue until the mode is canceled.

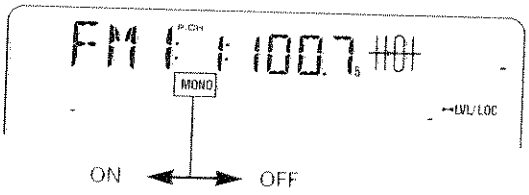


Changing to monaural audio mode

Change to monaural audio mode when noise is disturbing in FM stereo broadcasting. Noise will reduce in monaural audio mode.

Monaural audio mode switches ON/OFF every time the number button [9] is pressed.





If there is a station with poor receiving condition during preset scan tuning

> In FM/AM broadcasting, the system skips a preset number (station) with poor receiving condition and performs preset scan tuning.

Key guide "MONO" display

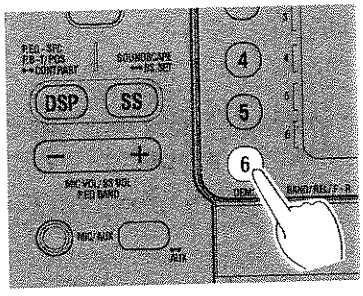
> When receiving an AM broadcast, "MONO" is displayed on the key guide, and even if you press the number button [9], you cannot to switch to a mode other than monaural.

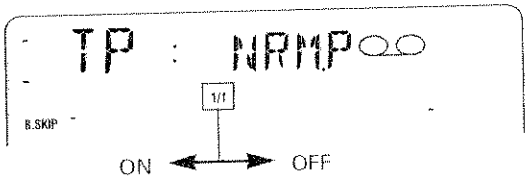
Useful functions for tape playback

FLEX function

Sometime when using an old cassette tape or a tape with poor recording conditions, you may feel that the high-pitched range is unclear.
In such a case, the FLEX (Frequency Level EXpander) function corrects the high-pitched range to proper level so that you can enjoy good sound quality.

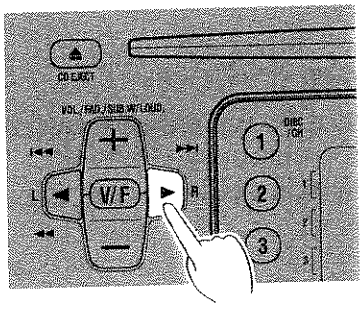
The FLEX function switches ON/OFF every time the number button [6] is pressed.

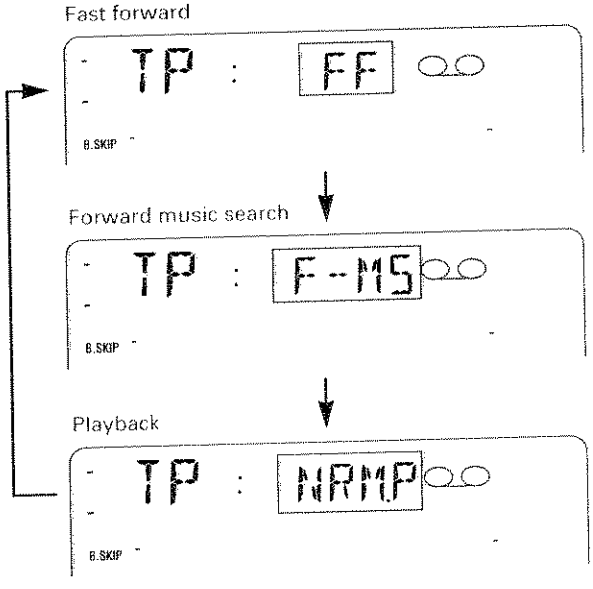




Fast forward/reverse and music search

The functions change in the sequence shown below every time the ► side of the ◄/► button is pressed.

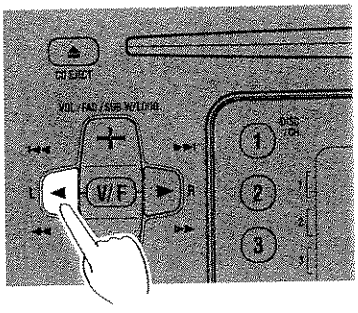


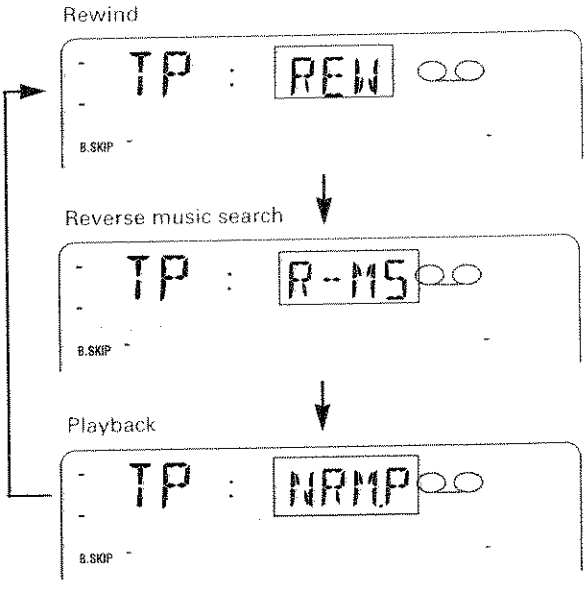


FLEX function

> When using a cassette tape with good sound quality containing music recorded from CD player, no FLEX effect may be obtained.

The functions change in the sequence shown below every time the ◄ side of the ◄/► button is pressed.





An alternative way to resume playback

> Pressing the BAND button also cancels the fast forward/reverse and music search function.

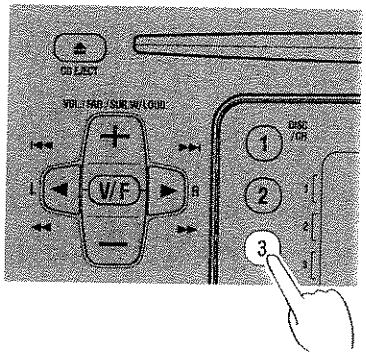
Music search does not operate properly with the following tapes

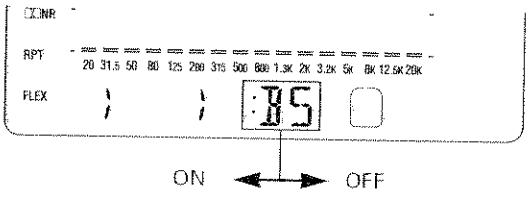
> As a blank between tunes cannot be searched accurately with the following tapes, the music search function may not operate properly:
- A blank between tunes is 4 seconds or less.
- A blank continues more than 4 seconds (recording of conversation, etc.).
- Very low sound continues more than 4 seconds in a tune.

Blank skip

A function to automatically skip to the beginning of the next tune when there is a blank of more than 12 seconds between tunes.

The blank skip function switches ON/OFF every time the number button [3] is pressed.

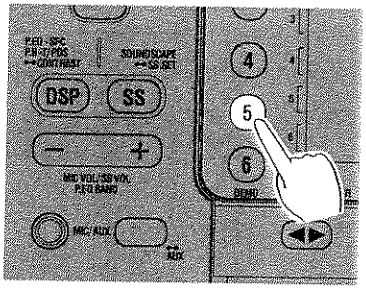




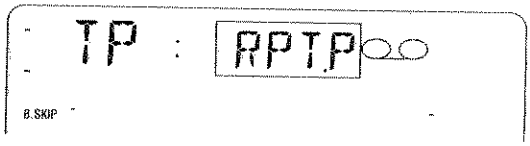
Repeated playback

The system repeatedly plays back the current tune.

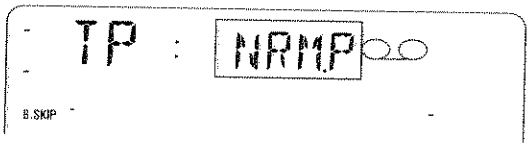
The repeat function switches ON/OFF every time the number button [5] is pressed.



Repeat ON



Repeat OFF



Other ways to cancel repeated playback

> Pressing the BAND button also cancels repeated playback.
> Performing fast forward/reverse and music search also cancels repeated playback.

Repeated playback does not operate properly with the following tapes

> As a blank between tunes cannot be searched accurately with the following tapes, repeated playback may not operate properly:
— A blank between tunes is 4 seconds or less.
— A blank continues more than 4 seconds (recording of conversation, etc.).
— Very low sound continues more than 4 seconds in a tune.

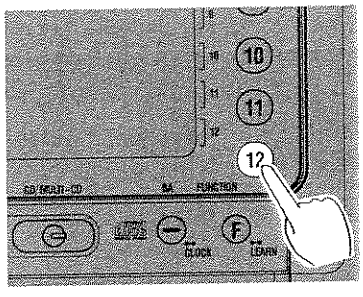
Useful functions for built-in CD playback

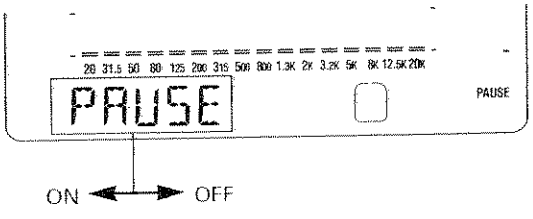
Pause

Temporarily stops a track being played back.

The Pause function switches ON/OFF every time the number button [12] is pressed.

> During Pause mode, functions other than fast forward/reverse can be operated.

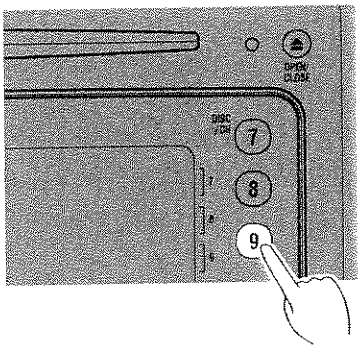


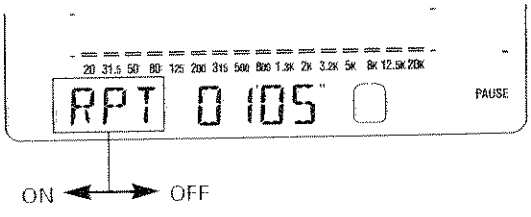


Repeated playback

The system repeatedly plays back the current track.

The repeated playback function switches ON/OFF every time the number button [9] is pressed.



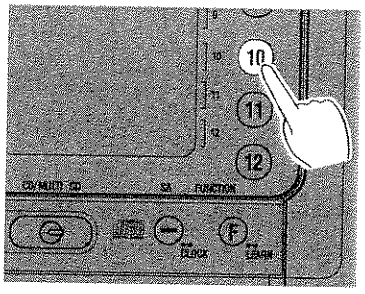


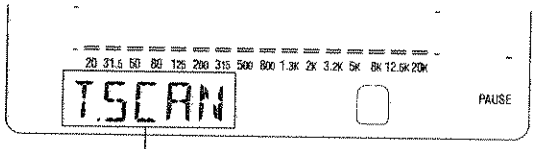
Scan playback

The system plays back the beginning of each track for 10 seconds in sequence. A useful function to search a desired track.

1. **Press the number button [10] to start scan playback.**

   The system plays back the beginning of each track for 10 seconds in sequence.





Displayed during scan play.

2. **When the desired track is played back, press the number button [10] again to cancel scan playback.**

   The system continues to play back the current track.

Scan playback will be automatically canceled

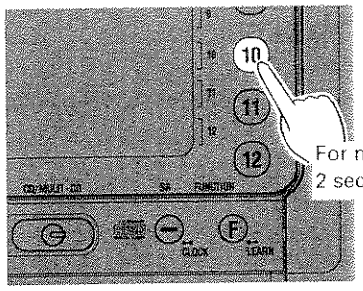
> Scan playback will be automatically canceled when the system returns to the first track of scan playback.

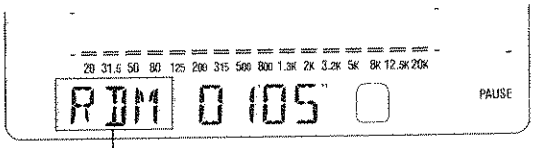
Random playback

The built-in microprocessor of the CD player selects tracks at random from the disc for playback.

1. **Press the number button [10] for more than 2 seconds to start random playback.**

   To cancel random playback, press the button again for more than 2 seconds.





Displayed during random play

Inputting the disc title

Connecting the multi-CD player to this unit allows you to input and store titles of the discs loaded in this unit and the multi-CD player. These disc titles can be displayed when the discs with titles are played back.

- **See page 73 for how to input disc titles.**
- **The disc title function does not operate when only this unit is used (without the multi-CD player).**

Useful functions for multi-CD playback

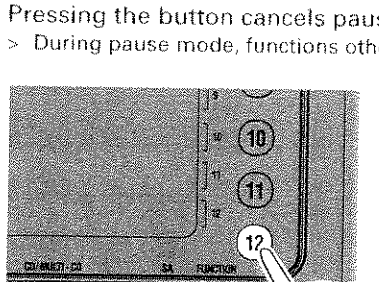
Pause

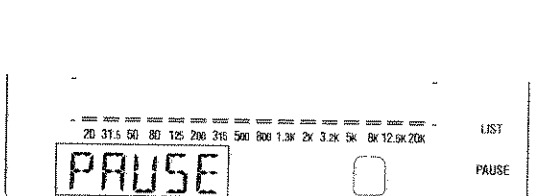
Temporarily stops a track being played back.

Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [12].

Pressing the button cancels pause mode.

> During pause mode, functions other than fast forward/reverse can be operated.



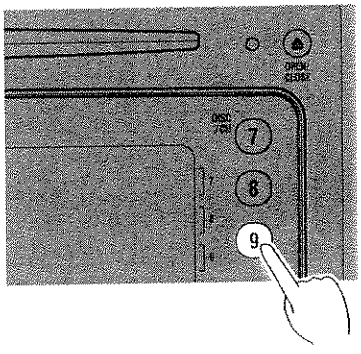


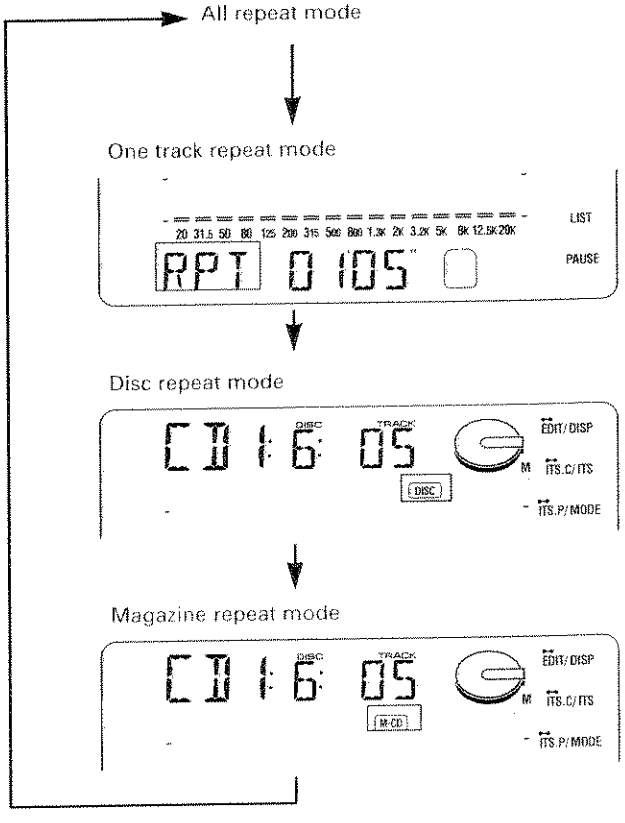
Repeated playback

A playback mode (repeat mode) can be selected from the following modes.

Play mode (repeat mode)	Operation
One-track repeat	Play the current track repeatedly. • When you perform track number search or fast forward or rewind, the mode changes to disc repeat mode. • Switching the multi-CD player being played or the disc switches to magazine repeat mode.
Disc repeat	Play the same disc repeatedly. • Switching the multi-CD player being played or the disc switches to magazine repeat mode.
Magazine repeat	Play all discs loaded in the magazine in the multi-CD player repeatedly. All discs in the magazine are played repeatedly from the first disc.
All repeat	The mode changes to this mode when 2 or more multi-CD players are connected. Multi-CD players 1 to 4 are played.

The modes change in the sequence shown below every time the number button [9] is pressed while the FUNCTION button is ON (yellow indicator lights up).





Scan playback

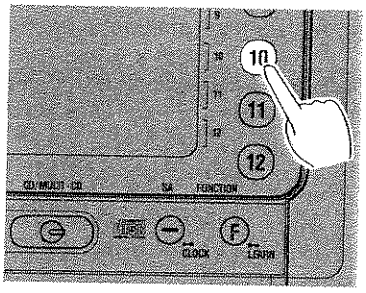
The system plays back the beginning of each track for 10 seconds in sequence. A useful function to search a desired track or disc. Scan playback functions as follows, depending on the current playback mode (repeat mode).

Play mode (repeat mode)	Tracks to be scanned and played
One-track repeat	All tracks on the disc being played. • The play mode changes to disc repeat mode.
Disc repeat	All tracks on the disc being played.
Magazine repeat	The first tracks of all the discs in the magazine being played.
All repeat*	First tracks of all discs loaded in multi-CD playes 1 to 4.

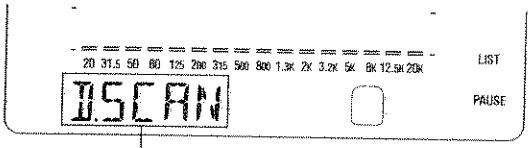
* When 2 or more multi-CD players are connected.

1. **Change to a playback mode (repeat mode).**
   [See the previous page.]
   Select a playback mode according to the desired scan playback.

2. **Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [10] to start scan playback.**
   The system plays back the beginning of each track for 10 seconds in sequence.



Example: Disc scan



Displayed during scan play

3. **When the desired track (disc) is played back, press the number button [10] again to cancel scan playback.**
   The system continues to play back the current track (disc).

Scan playback will be automatically canceled

> Scan playback will be automatically canceled when the system returns to the first track (disc) of scan playback.

Random playback

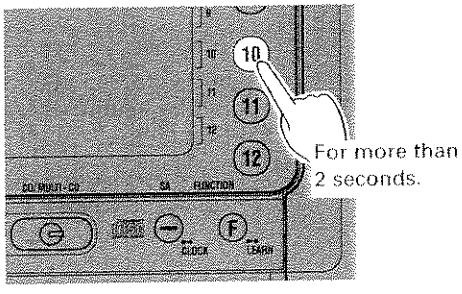
The built-in microprocessor of the multi-CD player selects tracks at random from the discs for playback. Random playback functions as follows, depending on the current playback mode (repeat mode).

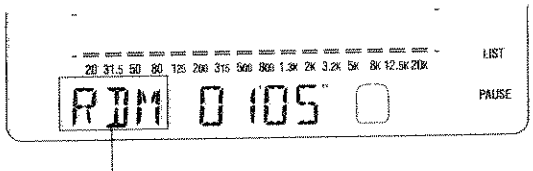
Play mode (repeat mode)	Tracks to be played at random
One-track repeat	All tracks on the disc being played. • The play mode changes to disc repeat mode.
Disc repeat	All tracks on the disc being played.
Magazine repeat	All tracks on the discs in the magazine being played.
All repeat*	All tracks on all discs in multi-CD players 1 to 4.

* When 2 or more multi-CD players are connected.

1. **Change to a playback mode (repeat mode).**
   [See page 67.]
   Select a playback mode according to the desired random playback.

2. **Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [10] for more than 2 seconds to start scan playback.**
   To cancel random playback, press the button again for more than 2 seconds.





Displayed during random play

ITS playback

ITS (Instant Track Selection) function is to playback programmed tracks only. Select your favorite songs and enjoy CD playback.

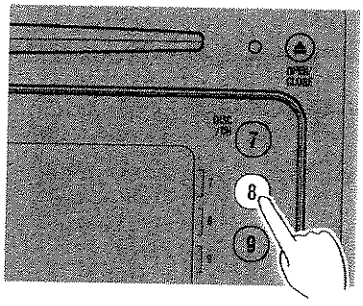
- Data for a maximum of 100 discs can be registered by using the ADPS function of the multi-CD player (together with the disc title input function [See page 73]).
- When the maximum number of 100 discs is exceeded, the oldest data of a disc that was not played back (data has not been updated) since registration will be deleted and the new disc data will be registered.
- Up to 99 tracks per disc can be stored.
- Storage of tracks is performed for each disc. If discs are replaced, the contents of data stored from the previous disc will not be deleted.
- ITS playback only functions with the multi-CD player. Built-in CD players cannot be used for ITS playback.

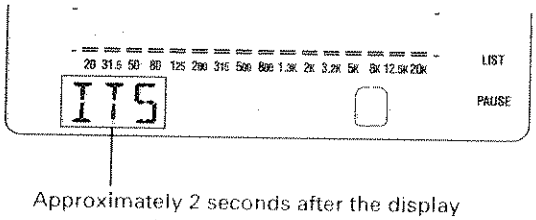
❖ Storing tracks

Perform storage of tracks in a mode other than ITS playback. (Tracks can be stored during scan or random playback.)

1. Playback a track to be stored.

2. Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [8] to store the track.





Approximately 2 seconds after the display come on writing to memory is completed.

ADPS function

» ADPS (Automatic Disc Program Selection) function is to store the information related to the discs. (With this unit, information on ITS and disc titles can be stored.)

» Information of discs and their contents are registered to the multi-CD player (Address 1 when using more than one players). Information for a maximum of 100 discs can be registered to the entire system.

❖ ITS playback

The system plays back only the stored tracks in sequence.ITS playback functions as follows, depending on the current playback mode (repeat mode).

Play mode (repeat mode)	Tracks to be played by ITS
One-track repeat	Programmed tracks on the disc being played • The play mode changes to disc repeat mode.
Disc repeat	Programmed tracks on the disc being played.
Magazine repeat	Programmed tracks on the discs in the magazine being played. • If the disc being played contains no programmed tracks, the next disc containing programmed tracks is played.
All repeat*	Programmed tracks on all discs in all magazines in multi-CD players 1 to 4. • If the disc (multi-CD) being played contains no programmed tracks, the next disc (multi-CD) containing programmed tracks is played.

* When 2 or more multi-CD playes are connected.

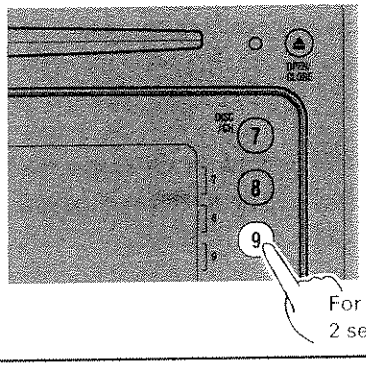
1. Change to a playback mode (repeat mode).

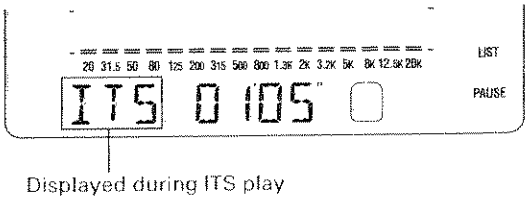
[See page 67.]

Select a playback mode according to the desired ITS playback.

2. Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [9] for more than 2 seconds to start ITS playback.

To cancel ITS playback, press the button again for more than 2 seconds.





If a stored track does not exist within the playback range of the selected repeat mode

> The display shows "EMPTY" for approximately 2 seconds to inform that ITS playback cannot be performed.

During ITS playback

> During ITS playback, switching of the multi-CD players, disc number search, track search, scan playback "ITS-SCAN" and random playback "ITS-RDM" are performed for the tracks stored in the system. (Discs and tracks that are not stored in the system cannot be selected.)

Preparation for ITS playback

> Before using the functions of ITS playback, the multi-CD player requires preparatory operation to read the disc information (data on total numbers of tracks and total time).

> The player automatically reads disc information when the magazine is loaded to the CD player. If CD playback is performed during reading, the system stops reading and performs CD playback (reading data requires dozens of seconds).

> If ITS playback is performed when reading is interrupted, the system stops CD playback and reads disc information (the display shows "READY"). The system resumes CD playback when reading is completed.

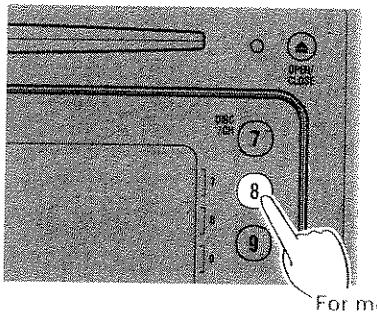
❖ Deleting a track from stored data

During ITS playback, the current track can be deleted from the stored data.

1. **Perform ITS playback.**
   [See the previous page.]

2. **Plays back the track to be deleted**
   Use the disc number search or track search function and play back the track to be deleted.

3. **Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [8] for more than 2 seconds to delete the track.**
   > If all tracks stored in the current playback range of repeat mode are deleted, the display shows "EMPTY" for approximately 2 seconds and ITS playback will be canceled.



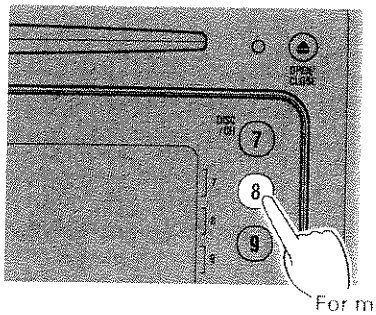
For more than 2 seconds.

❖ Deleting data of a disc

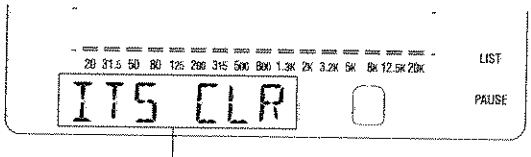
In a playback mode other than ITS playback, all tracks of the current disc stored in the system can be deleted.

1. **Plays back the disc to be deleted.**
   Use the disc number search function to play back the disc to be deleted from stored data.
   > During ITS playback, press the number button [9] for more than 2 seconds to cancel ITS playback. [See the previous page.]

2. **Confirm that the FUNCTION button is ON (yellow indicator lights up), then press the number button [8] for more than 2 seconds to delete the data.**



For more than 2 seconds.



"ITS CLR" is displayed for about 2 seconds to indicate that the disc information has been erased.

Using the parametric equalizer <P.EQ>

Calling the equalizer curves (factory mode)

In factory mode, the programmed six equalizer curves can be easily called by simply pressing a button.

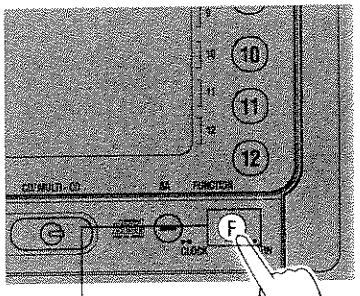
Applicable button	Equalizer curve	Key guide	
[1] button	Rock	ROCK	G B
[2] button	Pops	POPS	G B
[3] button	Fusion	FUSION	G B
[4] button	Vocal	VOCAL	G B
[5] button	BGM	B.G.M	G B
[6] button	Flat	FLAT	—

❖ Calling the equalizer curves

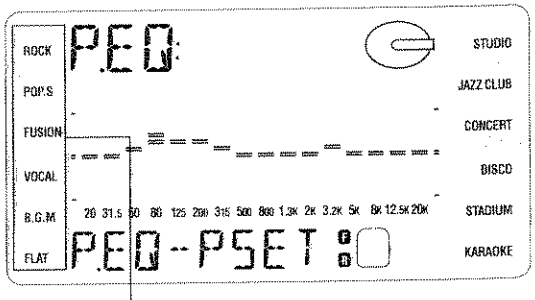
1. Press the DSP button to change to DSP/P.EQ mode.
[See page 82.]

2. Press the FUNCTION button to change to factory mode.

Factory mode switches to user mode and vice versa every time the button is pressed.



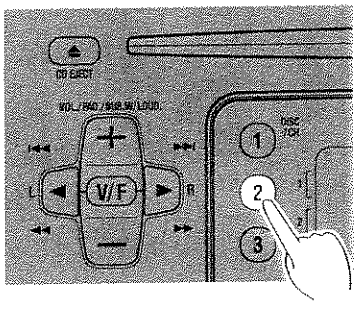
Factory mode ◄► User mode
(Lights in yellow) (Lights in orange)



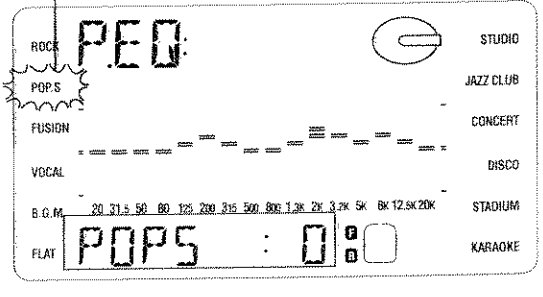
Factory mode ◄► User mode
(Displays key guide) (Key guide off)

3. Press a number button [1] to [6] corresponding the desired equalizer curve.

Example: Calling POPS



The selected equalizer curve flashes.



4. Return to the spectrum analyzer display.

[See page 82.]

With DSP/P.EQ mode, the functions of each source (repeat play, etc.) are disabled. After completing an operation in DSP/P.EQ mode, be sure to switch to the spectrum analyzer display.

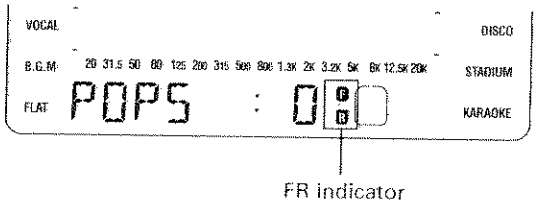
FR indicators

The FR indicators inform whether the equalizer is effective on the sound from the front or rear speakers through on/off of the indicator. When the equalizer is not effective (flat), the FR indicators are off.

> For the equalizer curves stored on the number buttons [1] to [5] in factory mode, the both FR indicators light up because setting of the front speakers is the same as with the rear speakers.

When the F indicator lights up: ——► The equalizer is effective on the front speakers (not flat).

When the R indicator lights up: ——► The equalizer is effective on the rear speakers (not flat).

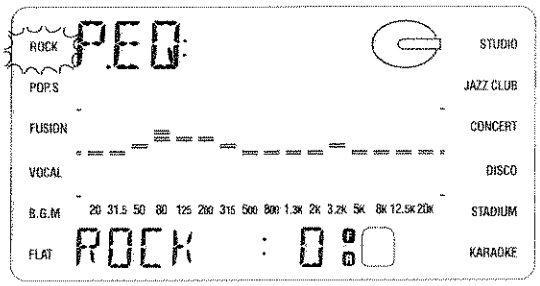


❖ Equalizer curves stored on this unit

For factory mode, the following six equalizer curves are stored on this unit.

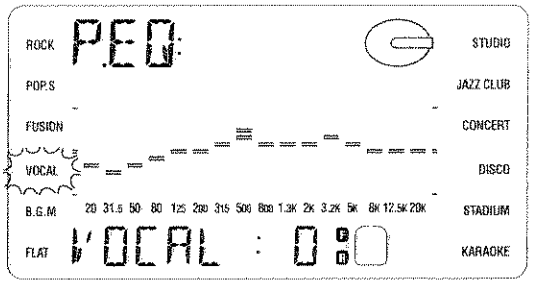
ROCK ([1] button)

Focuses on the band of rhythm section of rock music so that powerful sound can be reproduced with supplemented low and high ranges.



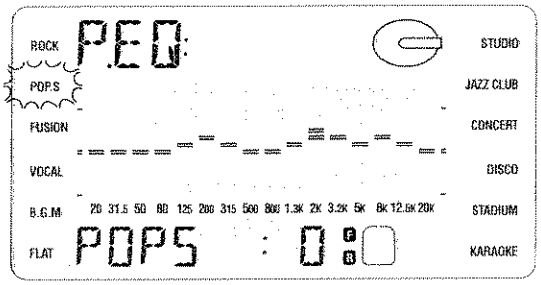
VOCAL ([4] button)

Emphasizes the portion of the voice band and minimizes the low range to increase articulation. Use this mode to emphasize vocal signals or when listening to conversation.



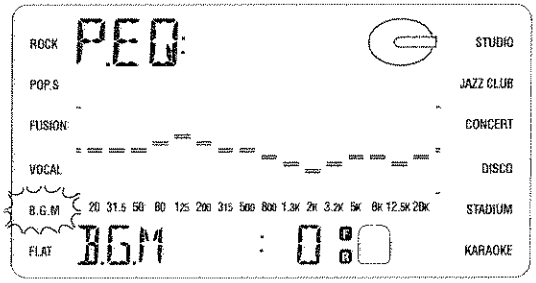
POPS ([2] button)

Particularly emphasizes the mid range so that light pops sound can be enjoyed.



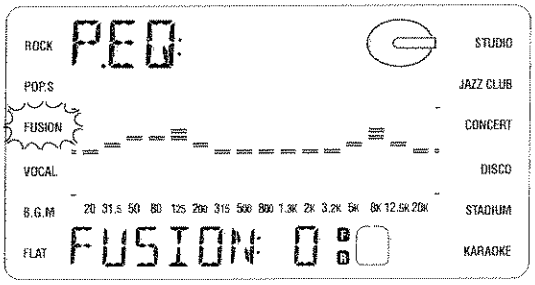
B.G.M ([5] button)

Controls stimulating treble and increases soft bass to produce music easy to listen to.



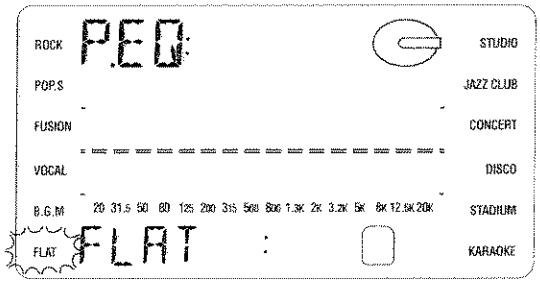
FUSION ([3] button)

Compared with ROCK mode, emphasizes the low and high ranges more intensively so that wide-range feeling can be obtained. Suitable to enjoy fusion music in relaxed environment.



FLAT ([6] button)

No supplement or correction is made to the sound. A useful function to check the effect of the equalizer curves by switching alternatively between FLAT and a set equalizer curve.

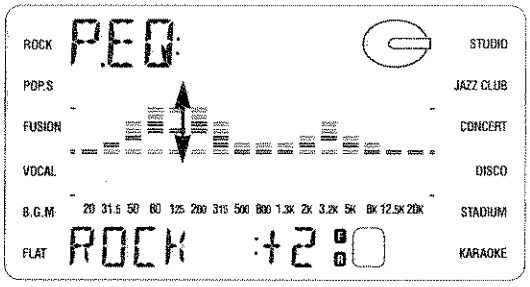


Adjusting the equalizer curves

The six equalizer curves stored in factory mode can be adjusted (fine adjustment). There are the following two methods for making the adjustment.

Nuance control adjustment

The equalizer curves stored in factory mode can be adjusted at fine level (nuance control).

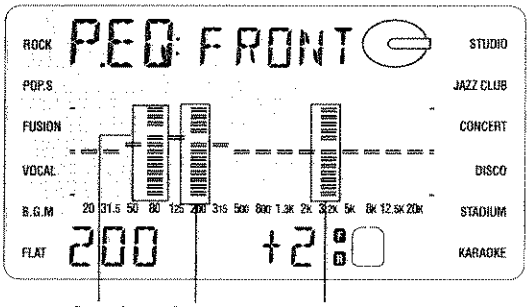


3-band parametric equalizer adjustment

The front and rear speakers can be separately adjusted by selecting the desired three frequency bands from 16 frequencies.

Frequency point: 20 to 20 kHz (a total of 16 frequency points at intervals of 2/3 octave)

Level adjustment range: –12 dB to +12 dB (2 dB/step)

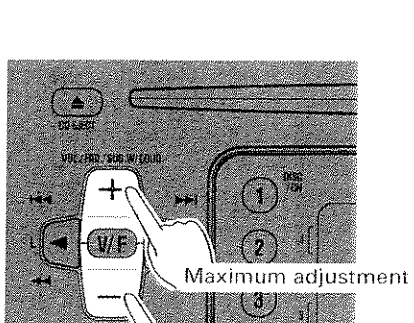


	Band 1	Band 2	Band 3
Adjustment range [Hz]	20 — 200	80 — 8 k	200 — 20 k

❖ Nuance control adjustment

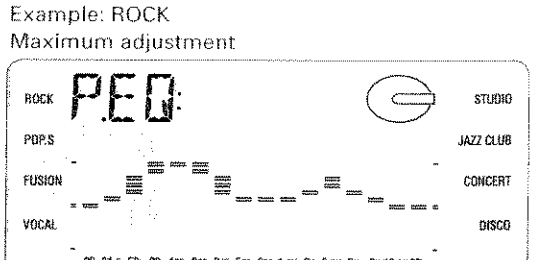
1. **Call the desired equalizer curve from those stored in factory mode. (however it cannot be adjusted from flat.)**
   [See page 85.]

2. **Press the +/– button. (▲/▼ button on the remote control unit.)**
   Fine adjustment will be made by pressing the button.

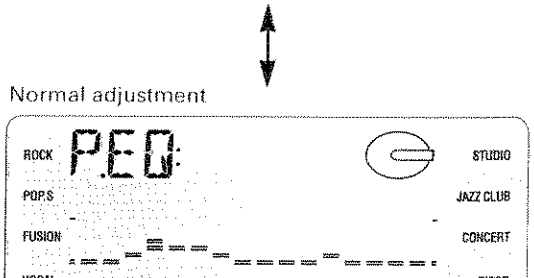


Example: ROCK

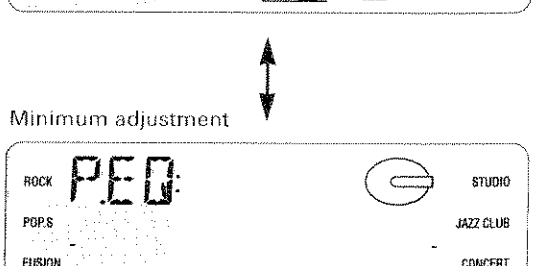
Maximum adjustment



Normal adjustment



Minimum adjustment

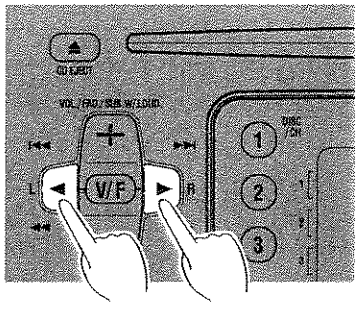


3. **Store the adjusted equalizer curve.**
   The adjusted equalizer curve will be reset when another equalizer curve is called.
   To store the contents of fine adjustment, store the data to this unit. [See page 92.]

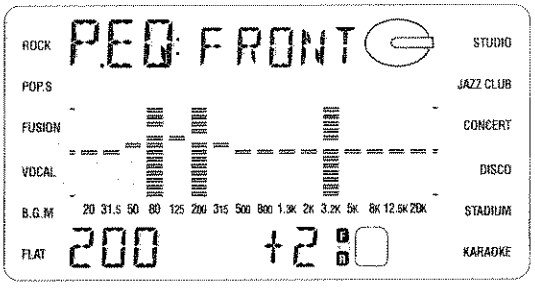
❖ 3-band parametric equalizer adjustment

1. **Call the desired equalizer curve from those stored in factory mode.**
   [See page 85.]
   > An equalizer curve stored in memory in User mode can be called and adjusted. To do so, follow procedure 3 below. See page 93 for how to call an equalizer curve.

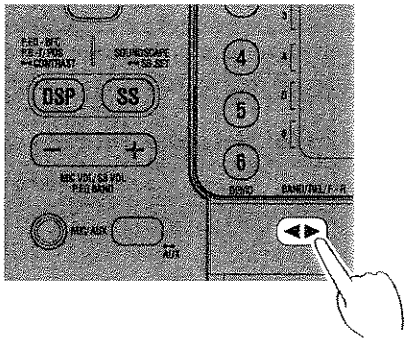
2. **Press both sides of the ◄/► button to change to adjustment mode.**

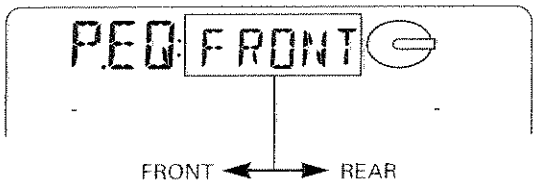


Press simultaneously.

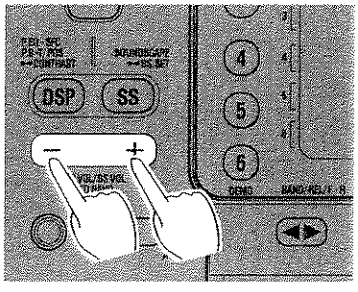


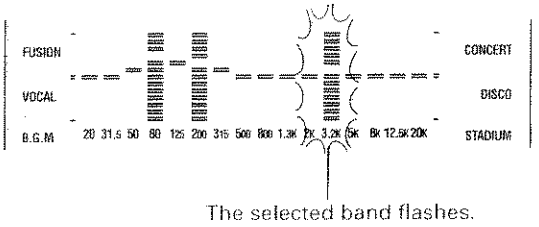
3. **Press the BAND button to select either front or rear speaker mode.**
   Front speaker mode switches to rear speaker mode and vice versa every time the button is pressed.





4. **Press the MIC VOL button and select the band to be adjusted.**

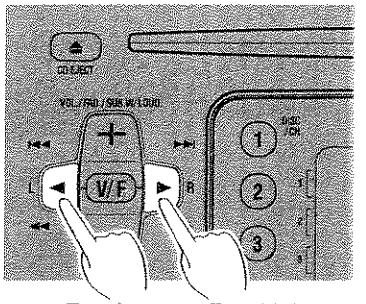




The selected band flashes.

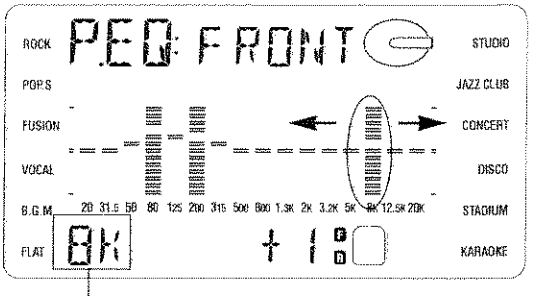
5. Press the ◄/► button to tune in to the desired frequency.

> It is not possible to set the two bands to neighboring flequencies.



To a lower frequency

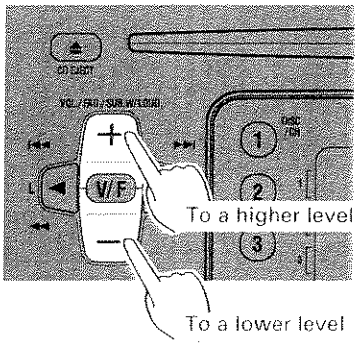
To a higher frequency



Indicates the selected frequency

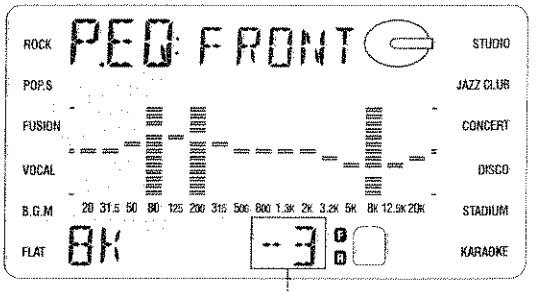
6. Press the +/– button to adjust the level. (▲/▼ button on the remote control unit.)

Holding down the button continuously forward the numbers.



To a higher level

To a lower level



–6 — +6

7. Adjust other bands.

Repeat steps 4 to 6 and adjust other bands to obtain your desired sound quality.

8. Switch to another (front/rear) speaker modes and set the equalizer curves.

Repeat steps 3 to 7 and make adjustment.

9. Store the adjusted equalizer curves.

The adjusted equalizer curve will be reset when another equalizer curve is called. To store the contents of fine adjustment, store the data to this unit. [See next page.]

Storing the equalizer curves (user mode)

In user mode, the adjusted equalizer curves can be stored and the stored equalizer curves can be called.

❖ Storing the equalizer curves

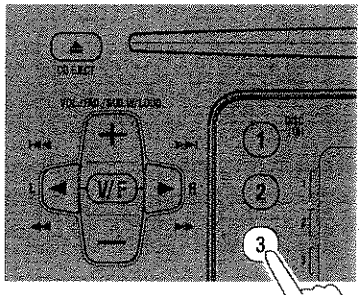
1. Adjust the equalizer curves (nuance control adjustment) according to your preference.

> See page 89 for details of nuance control adjustment.
> See page 90 for details of adjustment of the 3-band parametric equalizer.

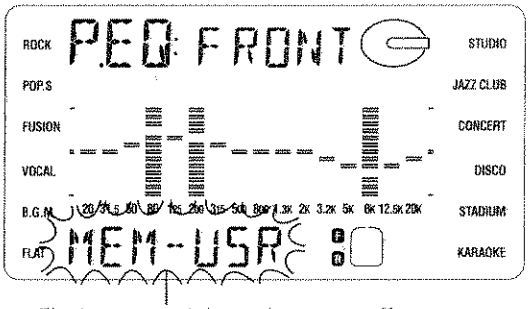
2. Press a number button [1] to [6] for more than 2 seconds.

> The equalizer curves can be stored in either factory or user mode. In both cases, data for the equalizer curves are stored to the number buttons [1] to [6] in user mode.
> Follow procedure 2 in DSP/P.EQ mode or B/T mode. The settings cannot can be stored in memory in other modes.
> When you set an equalizer curve, at that time the bass and treble settings are stored in memory as well.

Example: When storing in the number button [3]



For more than 2 seconds.

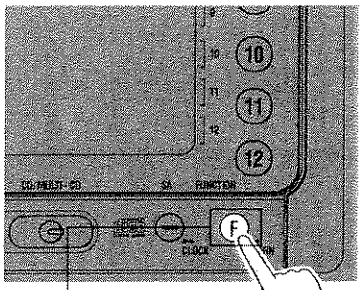


Flashes several times then goes off.

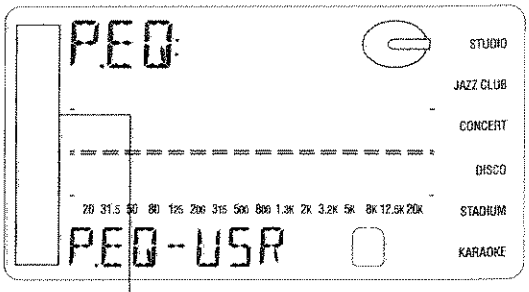
❖ Calling the equalizer curves

1. **Press the DSP button to change to DSP/P.EQ mode.**
[See page 82.]

2. **Press the FUNCTION button to change to user mode.**
User mode switches to factory mode and vice versa every time the button is pressed.



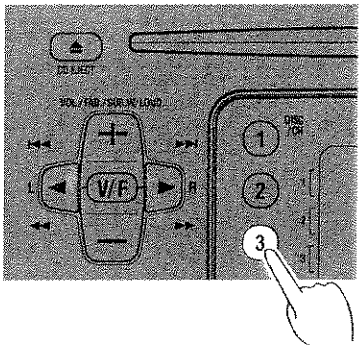
Factory mode ◄► User mode
(Lights in yellow) (Lights in orange)

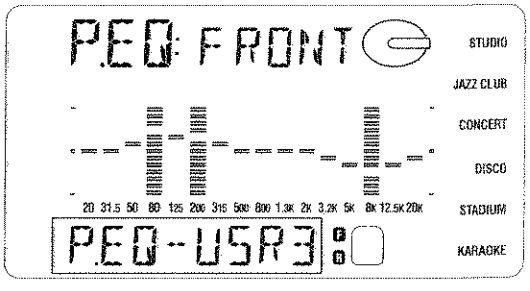


Factory mode ◄► User mode
(Displays key guide) (Key guide off)

3. **Press a number button [1] to [6] corresponding the desired equalizer curve.**
> When you call an equalizer curve, at that time the bass and treble settings are called as well.

Example: When calling the equalizer curve stored on the number button [3]





Correcting the sound field by the 3-band parametric equalizer

Adjustment of the 3-band parametric equalizer (page 90) can be used to produce a variety of sound types as well as for correcting the sound field.
With car audio equipment, sound quality will be specific to the installation location of the speakers. As the central frequency can be freely selected with the parametric equalizer, such shortcoming of car audio can be improved and smooth sound quality can be produced.
Try several settings by referring to the following adjustment examples in typical installation locations for the speakers.

CAUTION

To prevent accidents

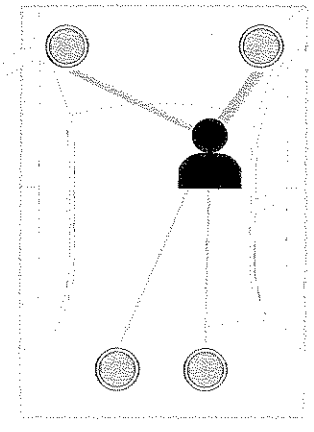
- **So as not to cause a traffic accident, do not attempt to adjust the equalizer while driving.**

Precautions during adjustment

- **Setting bass to high level may cause distortions in some speakers.**
- **With some car types, proper effect may not be obtained.**

Example 1:

Front speaker: Installation on the dashboad
Reat speaker : Installation on the rear tray



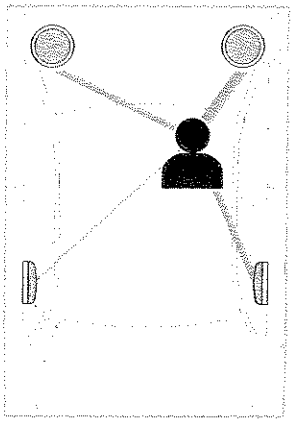
		Band 1	Band 2	Band 3
FRONT	frequency	200 Hz	500 Hz	1.3 kHz
	level (2 dB/1 step)	+ 2 dB (+1)	+ 4 dB (+2)	− 4 dB (−2)
REAR	frequency	50 Hz	200 Hz	500 Hz
	level (2 dB/1 step)	+ 2 dB (+1)	− 6 dB (−3)	+ 6 dB (+3)

Parametric bass/treble

> Adjust parametric bass/treble according to your preference. [See page 96.]

Example 2:

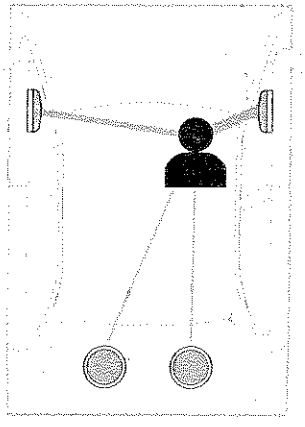
Front speaker: Installation on the dashboad
Rear speaker : Installation on the rear door



		Band 1	Band 2	Band 3
FRONT	frequency	200 Hz	500 Hz	1.3 kHz
	level (2 dB/1 step)	+ 2 dB	+ 4 dB	− 4 dB
REAR	frequency	125 Hz	1.3 kHz	3.2 kHz
	level (2 dB/1 step)	− 6 dB	− 2 dB	+ 4 dB

Example 3:

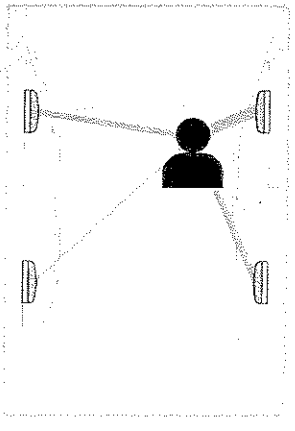
Front speaker: Installation on the front door
Rear speaker : Installation on the rear tray



		Band 1	Band 2	Band 3
FRONT	frequency	200 Hz	500 Hz	1.3 kHz
	level (2 dB/1 step)	− 4 dB	+ 4 dB	− 6 dB
REAR	frequency	50 Hz	200 Hz	500 Hz
	level (2 dB/1 step)	+ 2 dB	− 6 dB	+ 6 dB

Example 4:

Front speaker: Installation on the front door
Rear speaker : Installation on the rear door



		Band 1	Band 2	Band 3
FRONT	frequency	200 Hz	500 Hz	1.3 kHz
	level (2 dB/1 step)	− 4 dB	+ 4 dB	− 6 dB
REAR	frequency	125 Hz	1.3 kHz	3.2 kHz
	level (2 dB/1 step)	− 6 dB	− 2 dB	+ 4 dB

Using the parametric bass/treble <B/T>

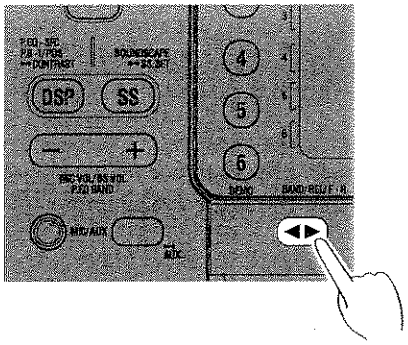
Adjusting bass/treble

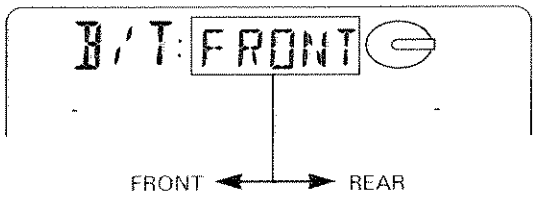
With the parametric bass/treble function, the frequency that is used as a point for level adjustment of bass/treble can be selected from four frequencies according to your preference. In addition, the front and rear speakers can be adjusted separately.

Bass: 80 Hz, 125 Hz, 200 Hz, 315 Hz
Treble: 3.2 kHz, 5 kHz, 8 kHz, 12.5 kHz
Level adjustment range: –12 dB to +12 dB (2 dB/step)

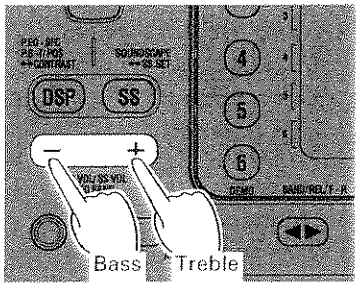
1. **Press the DSP button to change to B/T mode.**
[See page 82.]

2. **Press the BAND button to select either front or rear speaker mode.**
Front speaker mode switches to rear speaker mode and vice versa every time the button is pressed.

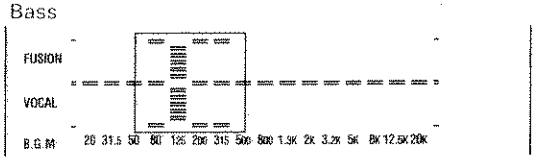




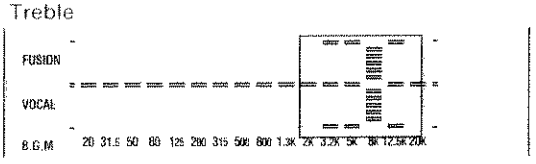
3. **Press the MIC VOL button and select either bass or treble.**



Bass

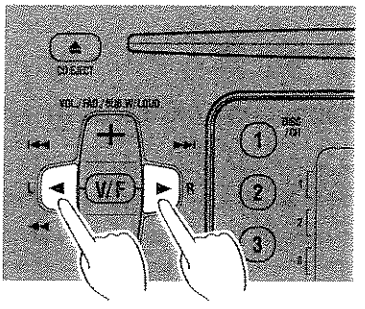


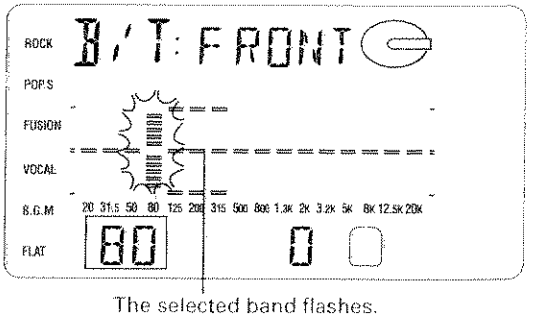
Treble



4. **Press the ◄/► button to select a frequency point.**

Tune in to the desired frequency point.

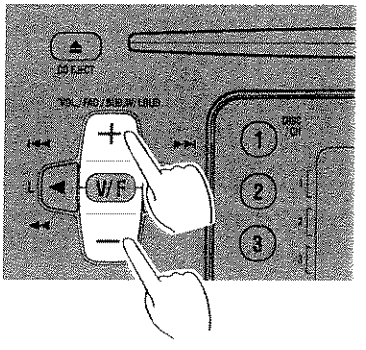


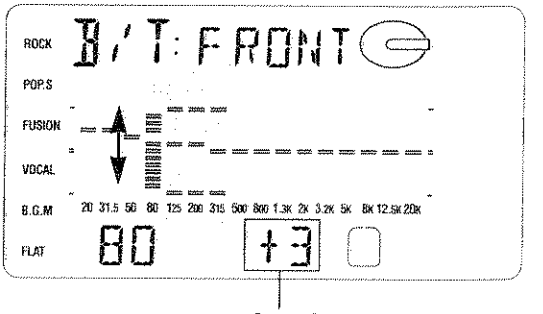


The selected band flashes.

5. **Press the +/– button to adjust the level. (▲/▼ button on the remote control unit.)**

Holding down the button continuously forward the numbers.





–6 — +6

6. **Switch to bass/treble.**

Repeat steps 3 to 5 and make adjustment.

7. **Switch to another speaker mode (front/rear) and make adjustment.**

Repeat steps 2 to 6 and make adjustment.

8. **Store the adjusted bass/treble levels.**

The bass and treble settings are reset if another equalizer curve is called from User mode. To retain the settings, be sure to store them in the unit's memory (see next page).

> From factory settings mode, the bass and treble settings are not reset, even when another equalizer curve is called.

9. **Return to the spectrum analyzer display.**

[See page 82.]

With B/T mode, the functions of each source (repeat play, etc.) are disabled. After completing an operation in B/T mode, be sure to switch to the spectrum anylzer display.

Storing bass/treble (user mode)

In user mode, the adjusted bass/treble levels can be stored and the stored bass/treble levels can be called.

❖ Storing the bass/treble levels

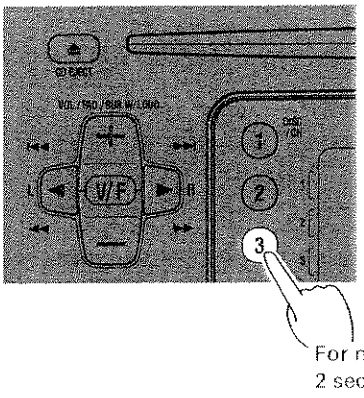
1. Adjust the bass/treble levels according to your preference.

[See page 96.]

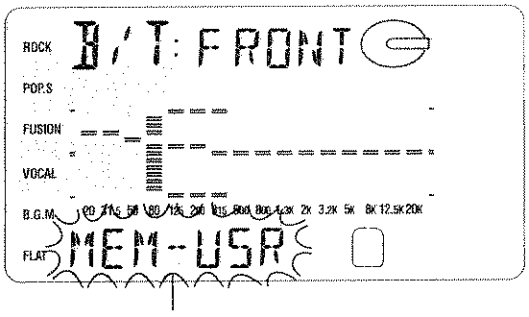
2. Press a number button [1] to [6] for more than 2 seconds.

> The bass/treble levels can be stored in either factory or user mode. In both cases, data for the bass/treble levels are stored to the number buttons [1] to [6] in user mode.
> Follow procedure 2 in DSP/P.EQ mode or B/T mode. The settings cannot can be stored in memory in other modes.
> When you set the bass and treble settings, at that time the equalizer curve is are stored in memory as well.

Example: When storing in the number button [3]



For more than 2 seconds.



Flashes several times then goes off.

❖ Calling the bass/treble levels

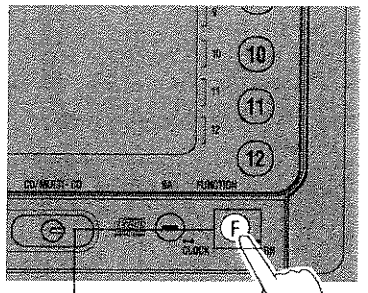
1. Press the DSP button to change to B/T mode.

[See page 82.]

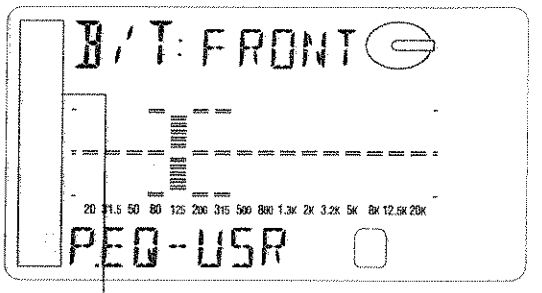
2. Press the FUNCTION button to change to user mode.

User mode switches to factory mode and vice versa every time the button is pressed.

> Even if called from Factory mode, the bass/treble settings cannot be changed.



Factory mode (Lights in yellow) ◄► User mode (Lights in orange)

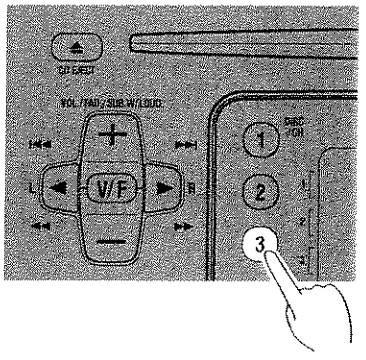


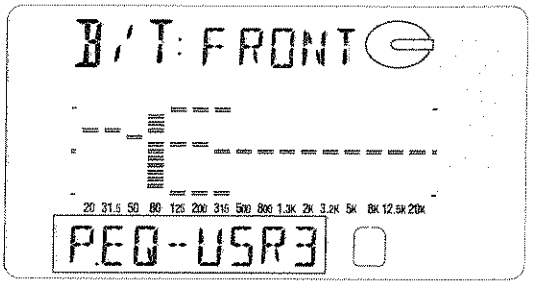
Factory mode (Displays key guide) ◄► User mode (Key guide off)

3. Press a number button [1] to [6] corresponding the desired bass/treble level.

> When you call the bass and treble settings, at that time the equalizer curve stored in memory is called as well.

Example: When calling the bass/treble level stored on the number button [3]





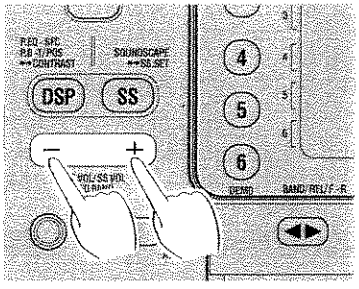
Using the listening position selector – POS

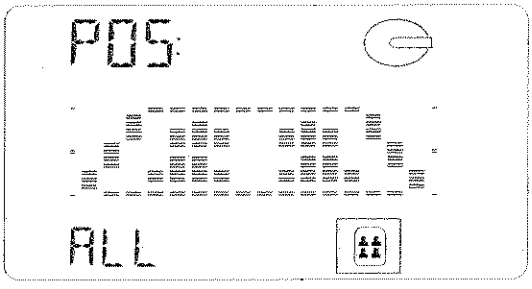
Setting the listening positions

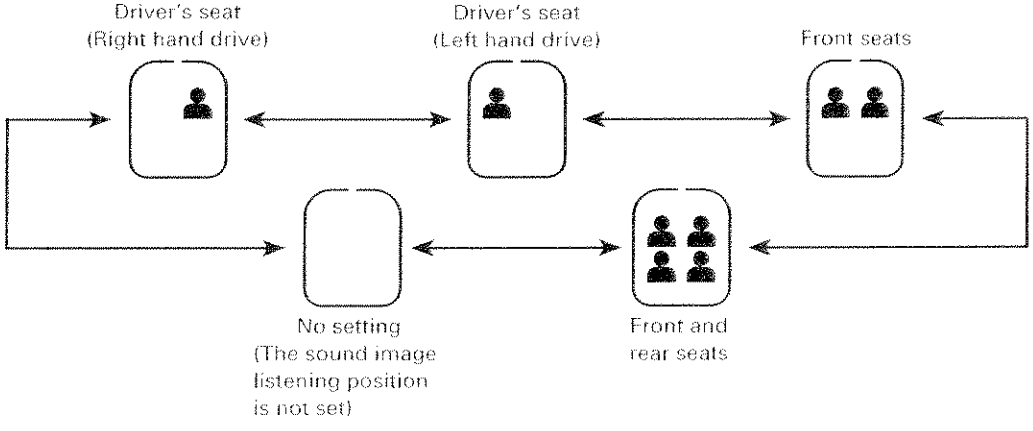
The system sets the listening positions according to the positions of the passengers.

1. **Press the DSP button to change to POS mode.**
[See page 82.]

2. **Press the MIC VOL button.**
The setting changes as follows when the button is pressed.







3. **Return to the spectrum analyzer display.**
[See page 82.]
With POS mode, the functions of each surce (repeat play, etc.) are disabled. After completing an operation in POS mode, be sure to switch to the specturm analyzer dispay.

Enjoying KARAOKE

Connecting a microphone to the MIC IN jack of this unit allows you to enjoy karaoke. (Use a microphone with miniplug jack with a diameter of 3.5 mm.)
The PIONEER MIC CONTROLLER [CD-MC2], cannot be used. Use another Pioneer microphone, or any other microphone on the market.

CAUTION

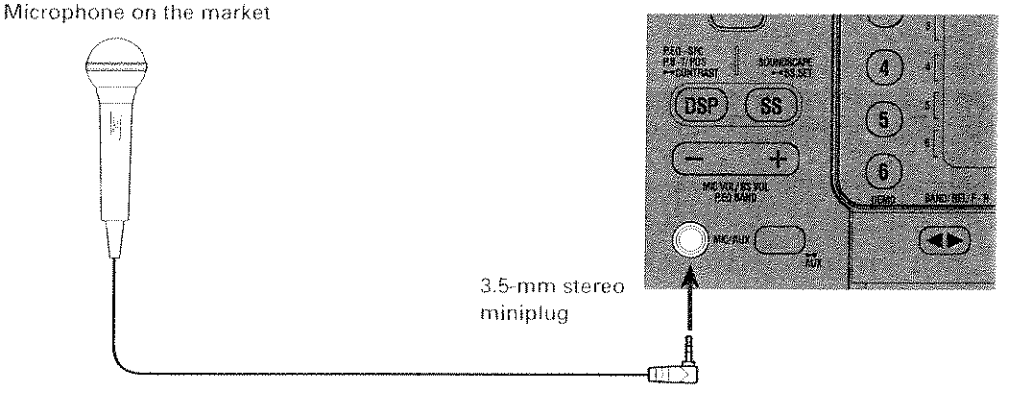
When using karaoke

- **Do not operate karaoke during driving and avoid behaviors that disturb driving operation. These may cause an accident.**

When not connecting the microphone

- **Set the MIC mixing to OFF when not using the microphone. A malfunction will be caused if noise enters from the MIC IN jack.**

1. Connect the microphone to this unit.

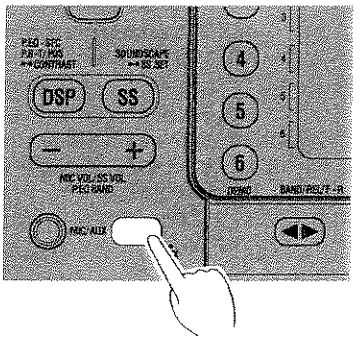


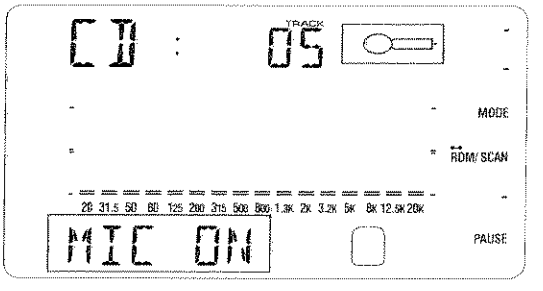
2. Switch the power of this unit ON.

Set the sound source to radio, tape, CD and AUX (external equipment).

3. Press the MIC button.

The MIC mixing switches ON/OFF every time the button is pressed.

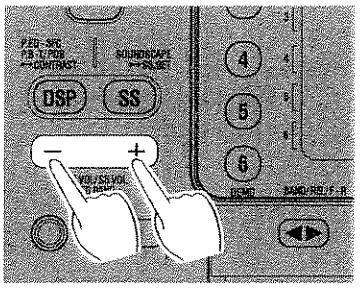


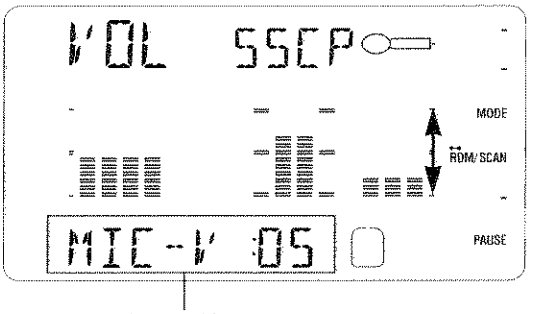


Continued overleaf.

4. **Press the MIC VOL button and adjust the sound volume of the microphone.**

   Holding down the button allows adjustment to be made continuously.





V: 00 — V: 20

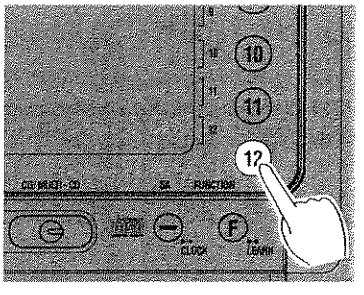
5. **Press the DSP button to change to DSP/P.EQ mode.**

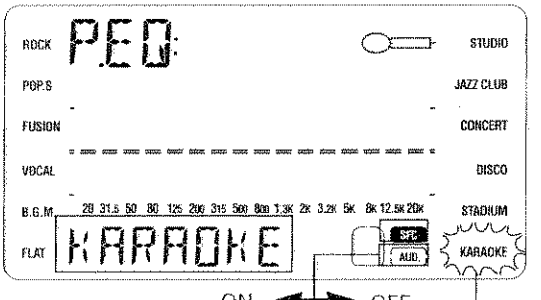
   [See page 82.]

6. **Press the number button [12] to select karaoke from the SFC.**

   The audition function switches ON and you can enjoy karaoke.

   > The karaoke function is disabled when receiving from the radio.





ON (karaoke ON) ↔ OFF (karaoke OFF)

Flash

Sound volume of the microphone

> To prevent the microphone from howling when switching the MIC mixing ON, the sound volume for the microphone is designed to always be adjusted from 00.

Audition function

> The audition function allows the voice of singer on tapes/CDs to be reduced. However, care should be taken for the following points.
>
> — The audition function only works during tape or CD playback. This function does not work while receiving radio broadcasts.
>
> — The audition function works with tunes recorded in stereo mode. (This function does not work with tunes recorded in monaural mode.)
>
> — With some tunes, the voice of singer remains even though they are recorded in stereo mode. If the voice was recorded with echo, the echo will remain and the voice of singer may be heard with delayed timing.
>
> — The audition function does not work with multiplex karaoke CDs.

Connection and installation

Read this section before connecting and installing, to ensure correct wiring.

CONTENTS

- **Connecting the units** **104**
  - After connection 105
  - Connection 106
- **Installation** **107**
  - Installing the remote control unit 108
  - Installation to Toyota or Nissan vehicles 109

Connecting the units

CAUTION

To prevent a short circuit

- Secure the wiring with cable clamps or adhesive tape. To protect the wiring, wrap adhesive tape around them where they lie against metal parts.
- Do not drill a hole into the engine compartment for an orange lead to the vehicle battery. Vibration may eventually wear through the insulation round the lead, resulting in a short circuit through the vehicle body.
- Do not route wires where they will get hot, for example where the heater will blow over them. If the insulation heats up, it may become damaged, resulting in a short circuit through the vehicle body.
- Make sure that wires will not foul moving parts of the vehicle, such as the gearshift, handbrake or seat sliding mechanism.

CAUTION

To avoid accidents

- Do not shorten any leads. If you do, the protection circuit may fail to work when it should.
- Never feed power to other equipment by cutting the insulation of the power supply lead of the unit and tapping into the lead. The current capacity of the lead will be exceeded, causing over heating.

To prevent damage

- When disconnecting a connector, pull holding the connector itself. Do not pull the lead, as it may come away from the connector.
- Do not connect the red lead to power source terminals to which power is continuously supplied. If the lead is connected, the car battery may be overloaded.
- When the unit is mounted in a vehicle whose ignition switch does not have the ACC (accessory) position as shown in Fig. 2, be sure to connect the red lead of the unit to the terminal controlled by the ignition switch ON/OFF position. If you do not, the vehicle battery may go flat when you leave your vehicle for several hours.

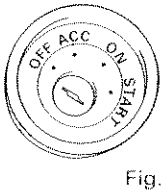


Fig. 1
ACC position

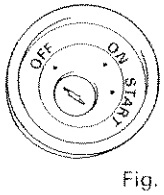


Fig. 2
Non ACC position

To prevent noise

> Install the antenna cord as far as possible from the IP-BUS cable, speaker lead and power source lead.

See the manual for each component in the system

> Connect the components correctly by referring to the manual for each component.

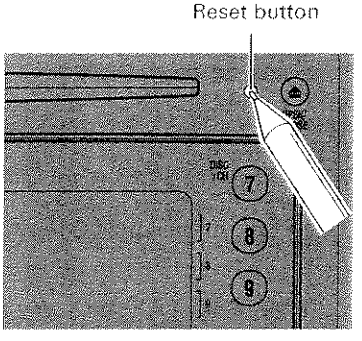
After connection

1. **Connecting the battery.**

   First, double-check that all connections are correct and that the unit is installed correctly. Reassembnle all vehicle components that you previously removed. Then connect the cable terminal to the negative (–) terminal of the battery.

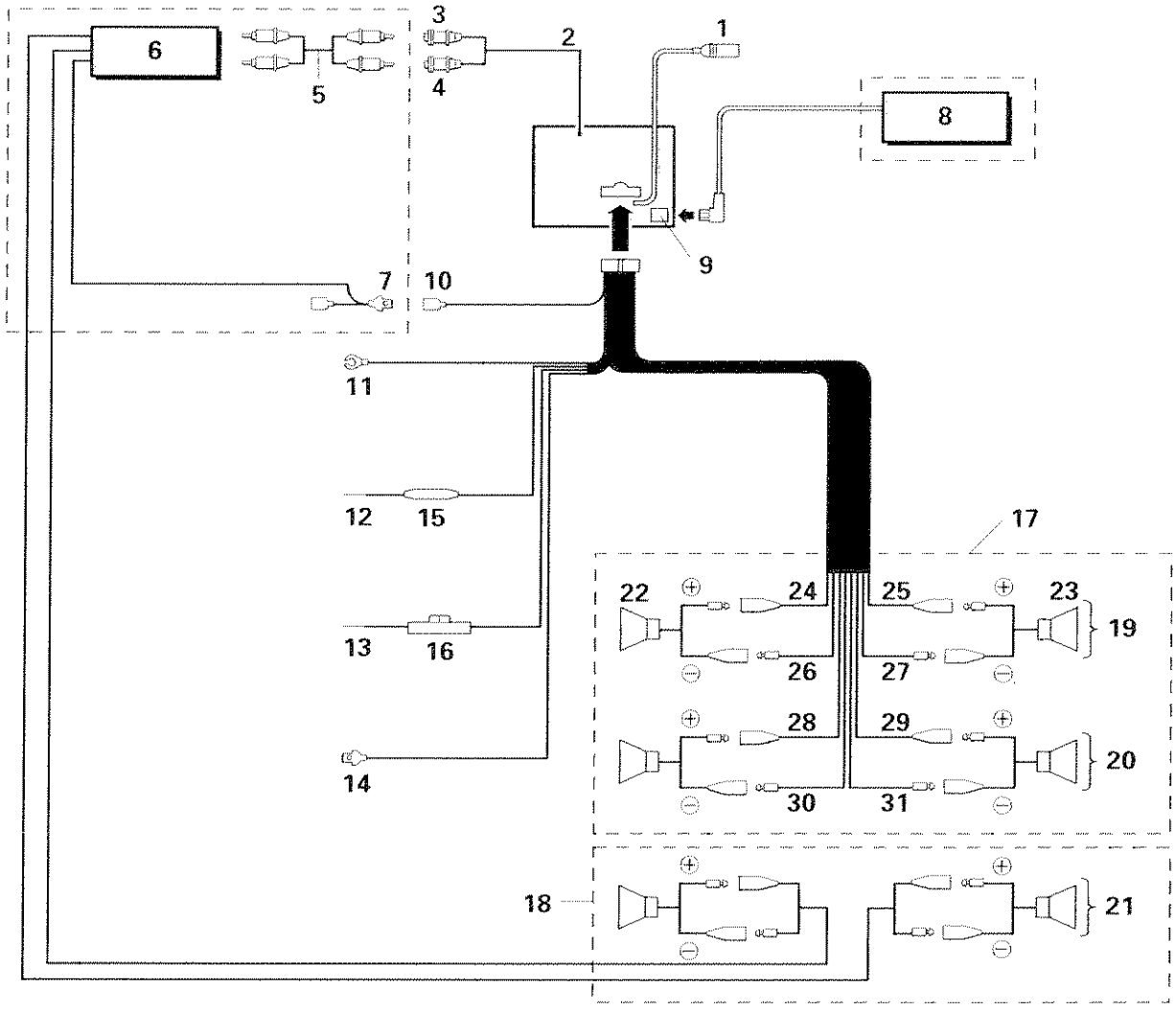
2. **Press the reset button.**

   Press the reset button on the main unit using a pointed object such as the point of a pencil.



Also press the reset buttons of all components equipped with one (see the manual for each component.)

Connection



1. Antenna jack
2. Rear output or subwoofer output
3. White
4. Red
5. Connecting cords with RCA pin plugs (sold separately)
6. Power amp (sold separately)
7. Blue
8. Multi-CD player etc. (sold separately)
9. IP-BUS input (blue)
10. Blue
    To system control terminal of the power amp or Auto-antenna relay control terminal (Max. 300 mA 12 V DC).
11. Black (ground)
    To vehicle (metal) body.
12. Red
    To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
13. Orange
    To terminal always supplied with power regardless of ignition switch position.
14. Yellow/Black
    Cellular mute
    If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.
15. Fuse resister
16. Fuse holder
    When replacing fuses, be sure to use only fuses of the rating prescribed on the fuse holder.
17. With a 2 speaker system, connect to the 2 speakers in the front or the rear.
18. Use this for connections when you have the separately available amplifier.
19. Front
20. Rear
21. Rear or subwoofer
22. Left speaker
23. Right speaker
24. Green
25. Gray
26. Green/black
27. Gray/black
28. Green/red
29. Gray/red
30. Black/green
31. Black/gray

Installation

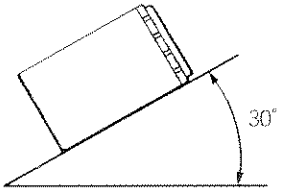
CAUTION

To avoid accidents

- Never install the unit in places like the following:
  - — Places where it could injure the driver or passengers if the vehicle stops suddenly.
  - — Places where it may interfere with the driver, such as on the floor in front of the driver's seat.
- Make sure that leads cannot get caught in the sliding mechanism of the seat, resulting in a short circuit.
- To ensure proper installation, use the supplied parts in the manner specified. If any parts other than the supplied ones are used, they may damage internal parts of the unit, or they may work loose and the unit may come off.

To prevent damage

- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.



Before installing and fixing

> Make temporary connections first, to check that the unit and system are working properly. If the unit does not work, refer to the heading. "Troubleshooting" (page 112) in case the connections are incorrect.

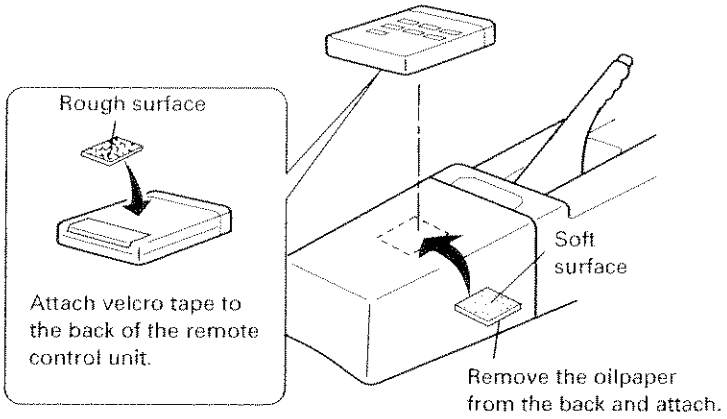
> Check that the main unit display can be opened and closed.

Before using adhesive tape

> Clean off any dirt on the side to which the double-side adhesive tape is to be attached.

Installing the remote control unit

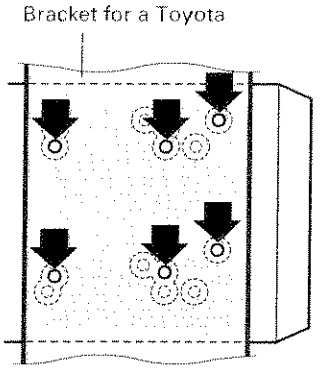
Use the supplied adhesive tape to install the remote control unit to an appropriate place such as the cover of the console box.


Rough surface
Attach velcro tape to the back of the remote control unit.
Soft surface
Remove the oilpaper from the back and attach.

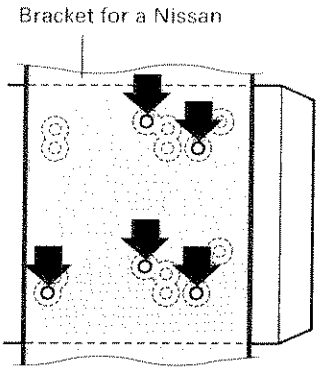
Installation to Toyota or Nissan vehicles

1. **Remove the radio and the glove compartment, etc.**
   After these parts are removed, the brackets that were used to attach them to the vehicle can be utilized to install this unit.
2. **Confirm the installation position.**
   Place the brackets on this unit to check the hole positions.

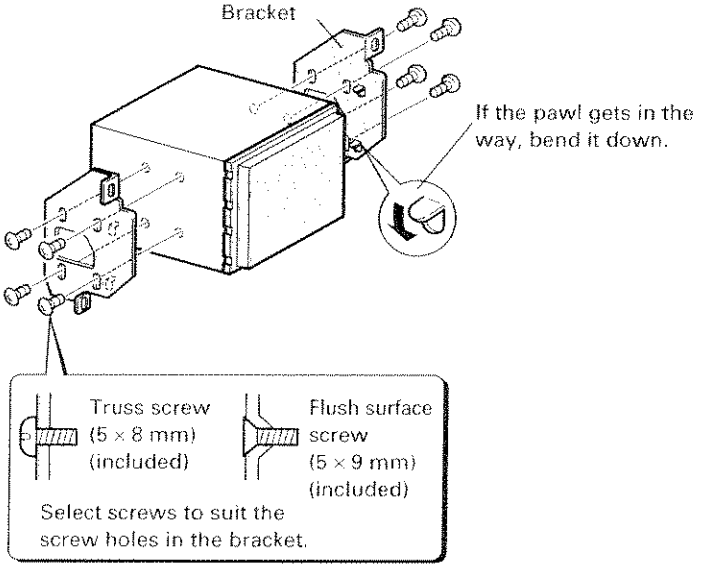
Toyota vehicle



Nissan vehicle



3. **Install the brackets with the supplied screws.**


Bracket
If the pawl gets in the way, bend it down.
Truss screw (5 × 8 mm) (included)
Flush surface screw (5 × 9 mm) (included)
Select screws to suit the screw holes in the bracket.

Attachments

If there is reason to suspect a breakdown, read "Troubleshooting" before sending the unit in for repairs. "Specifications" includes the performance and technical data of this unit, such as maximum power consumption and weight.

CONTENTS

- **Troubleshooting** **112**
  Checklist 113
- **Specifications** **116**

Troubleshooting

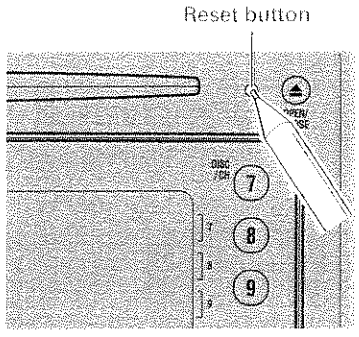
Minor mistakes in connecting up components or in operating equipment may lead to a mistaken impression that the equipment has failed. Carry out the following procedures if a breakdown is suspected.

1. **Double-check the connections and operations, using the checklist.**

   Also consult the "Troubleshooting" section of the manual for each individual component installed.

2. **If connections and operations are correct, press the reset button on the main unit.**

   If the main unit does not work when the operation buttons are pressed, or the power does not turn on, or inappropriate displays appear on the unit, or some similar fault is detected, the unit's microprocessor is not working correctly.
   In this case, press the reset button of the main unit using the tip of a pencil or a similar pointed object.
   Pressing this button resets the entire contents of memory (the clock setting, tuner presettings, etc.) of this unit. Set the memory again.



3. **If the unit does not function normally, even after pressing the reset button.**

In case of trouble
When the unit does not operate properly, contact your dealer or the nearest authorized PIONEER Service Station.
Never remove the top case of the unit to attempt check or repairs.

Checklist

Common items

Symptom	Cause	Remedy	See:
The sound does not come on or is faint.	The sound volume has been turned down.	Turn the sound volume up.	23
	Incorrect fader adjustment.	Adjust correctly.	39
	The attenuator of the remote control unit is ON.	Switch the attenuator OFF.	53
The power does not turn ON, the unit does not operate when the buttons are pressed, or the display does not show properly.	The built-in microprocessor operates incorrectly because of noise or other reasons.	Press the RESET button.	112

Tuner

Symptom	Cause	Remedy	See:
Loud noise is heard.	The tuner is not set to the frequency of the radio stations.	Adjust to a correct frequency.	25
No radio station can be found by seek tuning.	There is no radio station with a strong enough signal.	Select a station by manual tuning.	
	The unit is set to local mode.	Cancel the local mode.	55

Tape

Symptom	Cause	Remedy	See:
When the cassette tape is inserted, the tape does not play (the power turns OFF).	The tape is broken or tangled.	Replace the tape.	27
During playback, the cassette spontaneously switches to the other side.	The tape is badly wound.	Fast forward or rewind the tape to wind it correctly	60
No sound.	A blank tape has been inserted.	Replace the tape.	—
The sound quality is poor.	The quality of the recording is poor.	Replace the tape. If the sound quality improves, the previous tape must have been at fault.	
	Dolby NR is not working correctly.	Match the Dolby NR ON/OFF setting to the one used when the tape was recorded.	29
	The tape head is dirty.	Clean the tape head.	26
The music search function does not work correctly.	There is no gap of 4 seconds of longer between tracks.	Use a tape having gap of 4 seconds or longer between tracks.	60

Built-in CD/Multi-CD

Symptom	Cause	Remedy	See:
Loud noise is heard. Playback stops.	The disc is badly scratched or warped.	Replace the disc. If the new disc plays satisfactorily, the previous disc must have been faulty.	—
	The disc is extremely dirty.	Wipe off all dirt from the disc.	
The display shows an error message.	A malfunction has occurred in the built-in CD/multi-CD player.	For the built-in CD player, check the error by referring to "CD player error display" below. For the multi-CD player, check the error by referring to the owner's manual of the player.	

CD player error display

Display	Cause	Remedy	See:
11, 12	Dirt or a scratch on the disc stops the laser beam from being able to focus.	Wipe the dirt off the disc. Change the disc if it has been scratched.	30
14	An unrecorded one-time-recordable compact disc (CD-R) is being used.	When you use a CD-R, loaded one that has been recorded on.	—
30	Dirt or a scratch on the disc hinders the track search function.	Wipe the dirt off the disc. Change the disc if it has been scratched.	30
A0, 10, 12, 50, 60, 70	Electrical or mechanical system fault.	Turn the car ignition switch OFF, then ON again, or change to other sources except CD playback, and then to CD playback again. If the error indication does not disappear, contact your Pioneer service center or station.	—
HEAT	The CD player's internal temperature is high.	Wait until the CD player's internal temperature goes down.	

Connections

Symptom	Cause	Remedy	See:
The power does not come on.	The car battery is not connected.	Connect the car battery.	—
No movement.	An orange lead is not properly connected.	Connect all orange leads to the terminal supplied with constant power, regardless of the ignitions switch position, after running them through the vehicle's fuse unit.	106
	A red lead is not properly connected.	Connect all red leads to the electric terminal controlled by the ignition switch ON/OFF after running them through the vehicle's fuse unit.	
	The black lead (ground) is not properly connected.	Firmly connect all the black leads to the vehicle (metal) body.	
	The fuse has blown.	Find out why the fuse blew, and replace it with the another fuse of the same rating.	
	Incomplete connection.	Make sure all the connections are properly connected.	
The unit does not switch to AUX (exterminal input) source.	The AUX setup has not been switched ON.	When external equipment is connected to the IP-BUS input terminal, switch the AUX setup of the unit ON.	13
Noise enters.	The black lead (ground) is not properly connected.	Firmly connect all the black leads to the vehicle (metal) body.	106

Specifications

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format
(Sampling frequency) ..... 44.1 kHz
(Number of quantization bits) ..... 16 bit linear
Frequency characteristics ..... 5 — 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 90 dB (1 kHz)
Number of channels ..... 2 (stereo)

Tape player

Tape ..... Compact cassette tape (C-30 — C-90)
Tape speed ..... 4.8 cm/sec.
Fast forward/rewind time
..... Approx. 100 sec. for C-60
Wow & flutter ..... 0.09% (WRMS)
Frequency response
..... Metal: 30 — 22,000 Hz (±3dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
..... Metal: Dolby C NR IN: 73 dB (IEC-A network)
Dolby B NR IN: 67 dB (IEC-A network)
Dolby NR OUT: 61 dB (IEC-A network)

FM tuner

Frequency range ..... 87.5 — 108 MHz
Usable sensitivity ..... 11 dBf (0.8 µV/75 Ω, mono)
50 dB quieting sensitivity
..... 16 dBf (1.1 µV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 — 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 530 — 1,710 kHz (10 kHz)
531 — 1,602 kHz (9 kHz)
Usable sensitivity ..... 18 µV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±10 kHz)
50 dB (±9 kHz)

Equalizer amp common section

Tone controls (parametric)
(Bass) Frequency .... 80 Hz, 125 Hz, 200 Hz, 315 Hz
(Treble) Frequency
..... 12.5 kHz, 8 kHz, 5 kHz, 3.15 kHz
Equalization range ..... ±12 dB
3 band parametric EQ
Frequency ..... 20 kHz, 12.5 kHz, 8 kHz, 5 kHz, 3.2 kHz, 2 kHz, 1.3 kHz, 800 Hz, 500 Hz, 315 Hz, 200 Hz, 125 Hz, 80 Hz, 50 Hz, 31.5 Hz, 20 Hz
Equalization range ..... ±12 dB
Maximum current consumption ..... 7.0 A
Maximum power output ..... 30 W × 4 (EIAJ)
Continuous power output ..... 14 W × 4 (1 kHz, 1%)
Subwoofer ..... Cut off frequency: 50 Hz/80 Hz/125 Hz
Cut off slope : −18 dB/OCT
Gain : ±12 dB
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz)
Load impedance ..... 4 Ω (4 — 8 Ω allowable)
Nominal output level/
output impedance (pre out) ..... 500 mV/1 kΩ
Power source ..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Dimensions
(chassis) ..... 178 (W) × 100 (H) × 155 (D) mm
(nose) ..... 170 (W) × 95 (H) × 14 (D) mm
Weight ..... 2.6 kg

> The specifications and design are subject to change without prior notice. Products purchased may differ in details from illustrations in this manual.

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